NOTE VI.

ZOOLOGICAL RESULTS OF THE DUTCH SCIENTIFIC EXPEDITION TO CENTRAL BORNEO.

THE CRUSTACEANS

BY

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PART II. BRACHYURA. [1]

(Plates 5—12).

Like the Macroura, also the Brachyura collected by Dr. Büttikofer in Central Borneo ought to be considered as a valuable contribution to the Carcinological Fauna of this Island. Fifteen species were collected, all but one freshwater forms, inhabitants of the Kapoeas-basin and of the Upper Mahakkam, and of these 14 Land- and Freshwater-species no less than eleven or twelve proved to be new to Science! As far as I am aware, only three freshwater crabs were hitherto known to inhabit the large Island of Borneo, viz. *Parathelphusa tridentata* H. M. E., *Potamon borneense* v. Mart. and *Pot. loxophthalmum* de M. Now, however, this number has increased quintuple! Firstly a remarkable new species of *Menippe* ought to be mentioned, that was captured at Sanggau on the Middle Kapoeas. It is closely allied to the rare *Menippe Panope* Herbst from Tranquebar, a species not yet found back since Herbst, as far as I know, and that perhaps once may prove to be also a freshwater crab, whereas the other representatives of *Menippe* and *Myomenippe* are marine forms. A new description and a figure of the equally little-known *Myomenippe Fornasinii*, made after a type-specimen from the Paris Natural History Museum, is added, though this species was not collected. A pretty small *Sesarma* proved also to be new, unfortunately the locality was not defined, but very likely it has been collected at Sintang.

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[1] Part I, Macroura, has been published in Vol. XX, 1898, of this periodical.

The other 11 or 12 species are all Thelphusidae. *Parathelphusa tridentata* H. M. E. is represented by 15 specimens; this species is, already since 1868, known to inhabit Borneo by von Martens. This author described in the same year also a new *Potamon* from Borneo, *Potamon borneense*, a new variety of which was now collected, probably at Sintang. For this species and for two other new ones a new subgenus *Perithelphusa* is established.

An interesting new species, belonging to the subgenus *Potamon* s. s., was discovered by Dr. Nieuwenhuis on the Upper Mahakkam, and another allied form on Mount Damoes and on the Upper Sibau river. Both were compared with type-specimens of *Pot. sinuatifrons* H. M. E. from the Paris Museum.

On the Liang-Koeboeng Chain a remarkable new *Potamon* was captured, that bears a striking resemblance to *Pot. austenianum* W.-Mas., a species that inhabits Assam and that evidently is represented in Borneo by the new species. The four remaining belong to the subgenus *Geothelphusa* and are all new to science.

Professor Bürger of Göttingen was so kind as to send me the type-specimens of the Thelphusidae described by him in 1894. None of these species from the Philippines and Cape York proved to be identical with those of the Borneo-Expedition and I could state, moreover, that *Potamon sinuatifrons* H. M. E., the habitat of which was still unknown, is indeed an inhabitant of the Philippine Islands.

As regards the localities where the species were collected, I refer the reader to Dr. Büttikofer's account of the Expedition, published in Vol. XIX, 1897, pp. 1—25.

At the end of this Report one will find a List of all the species of *Potamon* Sav. and *Parathelphusa* H. M. E., hitherto described.

The species collected are the following:

Menippe Ortmanni, n. sp.
Potamon (*Parathelphusa*) *tridentata* H. M. E.
» (*Perithelphusa*) *borneense* v. Mart., var. *hilaris*, n.
» » *Büttikoferi*, n. sp.
» » *silvicola*, n. sp.
» sp.
» (*Potamon*) *mahakkamense*, n. sp.
» » *consobrinum*, n. sp.
» » *Melanippe*, n. sp.
» (*Geothelphusa*) *kenepai*, n. sp.
» » *hendersonianum*, n. sp.
» » *Bürgeri*, n. sp.
» » *bicristatum*, n. sp.
Metopograpsus messor Forsk., var. *gracilipes* d. M.
Sesarma (*Sesarma*) *Amphinome*, n. sp.

Remarks about the indopacific species of the genera *Menippe* de Haan and *Myomenippe* Hilgd.

Menippe de Haan.

This genus is represented in the Indopacific Region by five species, viz.:

1° *Menippe Rumphii* Fabr. Indian Ocean, Makassar.
2° » *armata* Eyd. & Soul. Sandwich Islands.
3° » *convexa* Rathb. Honolulu.
4° » *Panope* Herbst. Tranquebar.
5° » *Ortmanni*, n. sp. Middle Kapoeas.

Myomenippe Hilgd.

Myomenippe apparently contains only two species:
1° *Myomenippe Hardwickii* Gray.
2°' » *Fornasinii* Bianc.

Menippe Rumphii Fabr. is identical with *Menippe Belangeri* H. M. E., but *Menippe Rumphii* H. M. E. is an American species, inhabiting the coast of Brazil (A. Milne Edwards, Etudes sur les Xiphosures et les Crustacés de la Région Mexicaine, p. 263, Pl. 48, fig. 4).

Menippe granulosa Strahl (1861) is, according to von Martens (1872), identical with *Menippe Panope* Herbst.

There can be no doubt that *Myomenippe Hardwickii* Gray, the type of which is from the Indian Ocean, and *Myom. duplicidens* Hilgd. from South Celebes are one and the same species (confer: Miers, Annals and Magazine Nat. History, Ser. 5, Vol. 5, 1880, p. 233). As I have previously shown (in: The Journal of the Linnean Society, Vol. XXII, 1888, p. 40), *Myom. duplicidens* Hilgd. is also identical with *Myom. granulosa* A. M. E. (1867).

The second species of *Myomenippe*, found in the Indo-pacific Seas, is *Myom. Fornasinii* Bianc., described below.

Pelaeus armatus Eyd. & Soul. (Voyage de la Bonite) belongs, according to Dana, to the genus *Menippe* and I am of the same opinion. This species, that occurs at the Sandwich Islands, differs by several striking characters from the four other species of this genus. The front is quadridentate, the first and the second antero-lateral tooth are lobate and incised, the third is acuminate anteriorly, the fourth is spiniform.

Menippe quadridens de Haan and *Men. affinis* de Haan, both from the Moluccas, are nomina nuda (Fauna Japonica, p. 21).

Menippe parvula de Haan, Cape of Good Hope, is a true *Actaea* (de Man, l. c. p. 27).

Menippe Martensii Krauss from Natal and the Red Sea is apparently no *Menippe*, because the fingers are excavated and because the cephalothorax and the front have a different shape.

Herklots (Symbolae carcinologicae, 1861, p. 11) makes still mention of a *Menippe tetrodon* de Haan from the Moluccas, but this species is not recorded in the »Fauna Japonica."

Menippe signata White from the Mauritius and *Menippe*? *Cumingii* White from the Philippine Islands are nomina nuda; the latter is apparently no *Menippe*! (Gray, List of the Crustacea of the British Museum, 1847, p. 19).

Myomenippe Fornasinii Bianc.

(Plate 7, fig. 1).

Galene Fornasinii Bianconi, Specimina Zoologica Mosambicana, Fasciculus V, 1851, p. 84.

Galene? *hirtipes* Jacquinot et Lucas, Voyage au Pôle Sud et dans l'Océanie etc. T. III, 1853, Part 3. Crustacés, Pl. IX, fig. 3.

Menippe Leguillouii A. Milne Edwards, Annales Soc. Entomol. France (4) T. 7, 1867, p. 274.

Menippe (*Myomenippe*) *Fornasinii* Hilgendorf, in: Monatsbericht königl. Akad. Wiss. zu Berlin, Nov. 1878, p. 795.

? *Pararuppellia saxicola* Haswell, Catalogue of the Australian Stalk- and sessile-eyed Crustacea, 1882, p. 74.

Myomenippe Leguilloui Ortmann, Die Decapodenkrebse des Strassburger Museums, 1893—94, p. 432.

Though this rare species is not in the collection, a new description and a new figure may be welcome.

Two type-specimens of *Menippe Leguillouii* A. M. E. from the Paris Natural History Museum are lying before me; they are in a dry state, an adult female without eggs and a young male, collected by Leguillou in the »Mer des Indes" (A. Milne Edwards, l. c.). One of these specimens was sent by me to Prof. Hilgendorf at Berlin, who, together with Dr. Römer, compared it with the specimens from the Coast of Mozambique that in 1878 were described by the former under the name of *Menippe Fornasinii*, and Dr. Römer thereupon informed me that it was identical with them. I therefore conclude that Bianconi's species and *Myomenippe Leguillouii* A. M. E. are indeed one and the same species.

Galene? hirtipes Jacq. and Lucas and *Myom. Leguillouii* A. M. E. are apparently identical, as both the description and the figures in the »Voyage au Pôle Sud" fully agree with the type specimens of the latter.

Ortmann refers to this species also Haswell's *Pararuppellia saxicola* from the Eastern coast of Australia, which indeed appears quite probable. As also a specimen of *Myom. granulosa* A. M. E. from the Mergui-collection is lying before me, it will be easy to indicate the principal differences between the two species of *Myomenippe.*

As regards their outer appearance, the general shape of cephalothorax and legs, both species closely resemble one another. The front and the orbits show the same characters, fully agreeing in the number and the form of the teeth. Behind the outer angles of the orbits that are acute and dentiform, in both specimens four teeth are observed and in both the second is the largest of all. This second tooth, however, appears in *M. Fornasinii* slightly longer in proportion to the first than in *Myom. granulosa* A. M. E. In *M. granulosa* A. M. E. the distances between the tip of the second tooth and those of the third and first are about in proportion as 3 : 2, but in Bianconi's species as 5 : 3. The first and the second tooth are moreover less prominent in *M. Fornasinii*, the second tooth indeed is 8-times as long as high, but in *Myom. granulosa* 6-times: in other words the anterior margin of these teeth appears somewhat shorter in proportion to their length than in *Myom. granulosa* A. M. E. The margins of the antero-lateral teeth are finely granulate in *M. Fornasinii*, but in the other the granules are conical, more prominent and less numerous. The interregional grooves are, at least on the anterior half of the upper surface, quite distinct and moderately deep in *M. granulosa*, but they are almost wanting in *M. Fornasinii*; the mesogastric furrow that bifurcates posteriorly, reaching, however, only till the middle of the gastric region, is faintly indicated and so also the lateral portions of the cervical suture, the grooves between the gastric region and the anterior branchial one, but other grooves are not to be seen. In *M. granulosa* the regions of the upper surface before the line that unites the antero-lateral teeth of the last pair with one another, are distinct and well-defined, more or less prominent and covered with coarse granules, but the interregional grooves and furrows are smooth; in *M. Fornasinii* on the contrary the regions are scarcely distinct, inconspicuous, and the whole upper surface of the cephalothorax appears smooth to the naked eye. Only when the carapace is examined under a strong magnifying glass, one observes a minute granulation near the antero-lateral and on the postero-lateral margins, on the frontal teeth, on the upper margin of the orbits and on the epigastric lobes. In both species, immediately behind the frontal teeth of the second pair, a small tubercle is present; this tubercle is less conspicuous, more rounded in the species described by Bianconi.

The general shape of the chelipedes is the same in both and even as regards the form and the toothing of the fingers, *M. Fornasinii* agrees with *M. granulosa*. These legs, however, are everywhere quite smooth in Bianconi's species, but conspicuously granulated in *M. granulosa*, as has been described in my Report on the Crustacea of the Mergui Archipelago. The chelae of *M. Fornasinii* appear, however, distinctly punctate to the naked eye; these puncta are more numerous and somewhat larger on the upper margin of the palm than on its convex outer surface and between them a much finer microscopical punctulation is moreover observed, when the legs are examined under a strong lens.

The ambulatory legs also agree with those of *M. granulosa* A. M. E.[1]).

The measurements of the adult female, type of *Menippe Leguillouii* A. M. E. from the Paris Museum, are the following:

Measurements in mm.:

Distance between the penultimate antero-lateral teeth = Breadth of the cephalothorax	62
Length of the cephalothorax (front included)	42½
Distance between the outer orbital angles	29
Distance between the inner angles of the upper orbital margins	19
Distance between the external orbital angle and the tip of the first antero-lateral tooth	3¼
Distance between the tip of the first and that of the second antero-lateral tooth	7¼
Distance between the tip of the second and that of the third antero-lateral tooth	12
Distance between the tip of the third and that of the last antero-lateral tooth	9½
Width of the posterior margin, i. e. the distance between the bases of the fifth pair of legs	11½
Length of the larger hand	47
Horizontal length of the palm	33
Height of the palm at the articulation of the fingers	24
Length of the ambulatory legs of the last pair	55
Length of the meropodite of these legs	16
Breadth ″ ″ ″ ″ ″ ″	7
Length of the propodites of these legs, in the middle	12
Breadth ″ ″ ″ ″ ″ ″ ″ ″	5¼
Length of the dactylopodites of these legs	11½

Genus *Menippe* de Haan.

Menippe Ortmanni, n. sp.

(Plate 5, fig. 2).

One single female without eggs was collected by Mr. L. C. Westenenk at Sanggau on the Middle Kapoeas.

This pretty small *Menippe*, which I have the pleasure

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1) I may here remark that Ortmann (in: Semon, Zoolog. Forschungsreisen in Australien und dem Malayischen Archipel, Crustaceen, 1894, p. 48) is wrong when referring *M. duplicidens* Hilgd. = *M. granulosa* A. M. E. (nec Strahl) = *M. Hardwickii* Gray to *Menippe Panope* Herbst. In my „Report on the Crustacea of the Mergui Archipelago", I have shown that Herbst's species, that is identical with Strahl's *Menippe granulosa*, is a true *Menippe*, not a *Myomenippe*.

to dedicate to Dr. A. E. Ortmann of Princeton N. J., the author of so many important carcinological memoirs, bears such a striking resemblance to *Menippe Panope* Herbst from Tranquebar that I thought it necessary to send this specimen to Prof. Hilgendorf at Berlin, who kindly compared it with the type of Herbst, also a female, and then indicated to me the differences, so that this species, an inhabitant of freshwater, proved to be new to science. The cephalothorax has exactly the same width and length as the type of *Menippe Panope*, so that the new species is probably also one of small size and the general shape of the carapace is the same. Prof. Hilgendorf informed me that both species also agree with one another as regards the convexity and the outline of the cephalothorax. The greatest width, at the tips of the penultimate antero-lateral teeth, is not yet once and a half as large as the length, measured in the middle. The cephalothorax is strongly convex fore and aft, somewhat less from side to side. Just behind the middle one observes the usual H-shaped figure, that is not formed by furrows as usual, but only by the absence of the minute granules with which the whole surface of the cephalothorax is covered. The regions are inconspicuous, not at all defined, for besides the H-shaped figure only the mesogastric furrow is to be observed, and even the lateral branches of the cervical groove, the boundary between the gastric and branchial regions, are completely wanting. A little before each anterior extremity of the H-shaped figure, I observed an impressed point, corresponding to the posterior extremity of the protogastric areae. An imaginary line that unites these two points, crosses the lateral margins about in the middle between the tips of the two posterior antero-lateral teeth and the distance between this line and the frontal margin measures almost two thirds of the distance between it and the posterior margin of the cephalothorax. Just as in *Menippe Panope*, the two epigastric lobes are lying at some distance behind the free border of the front, between the orbits; these lobes are declivous forward and towards the orbits and are separated from one another by the mesogastric furrow that, after bifurcating, extends only over the anterior fourth part of the cephalothorax. In *Menippe Panope*, however, the interregional grooves are well-defined, though Hilgendorf informs me that they are less conspicuous than in Herbst's figure. The whole upper surface of the cephalothorax shows, under the lens, an extremely fine and close microscopic granulation, but it appears smooth to the naked eye; only just near the penultimate antero-lateral teeth these minute granules are a little larger, though still only visible by means of a magnifying-glass. The anterior moiety of the cephalothorax of *Menippe Panope*, however, is covered anteriorly and on the antero-lateral regions with numerous red pearly granules at least twice as large as the microscopic granules described above and observed also on the species from Tranquebar. Such large granules are observed, in *Menippe Ortmanni*, only on the front, just behind the free border, so that they are already fully wanting on the epigastric lobes. On each side of the upper surface of the cephalothorax one observes six or seven impressed points, situated in a semicircular line, that runs from the impressed point described above, just before the ends of the H-shaped figure, to the extremity of the ridge of the last antero-lateral tooth. The upper surface is also somewhat pitted on the front, just behind the supra-orbital margins and near the antero-lateral border of the carapace.

The front is obliquely deflexed and as prominent as in *Menippe Panope*; it is cut by a rather deep triangular notch into two obtuse lobes. The granulated fore edge of these lobes shows at its outer angle a small obtuse tooth before passing into the supra-orbital margin, so that the front may be described as four-lobed; these small external teeth reach about as far forward as the inner lower angle of the orbits and form an obtuse angle with the upper margin of the orbits; the distance between these two obtuse angles, i. e. the width of the front, measures a little less than a third of the greatest breadth of the cephalothorax.

The distance between the outer angles of the orbits is little more than half the greatest width; these angles are dentiform, but small and not very conspicuous. The finely granulated supra-orbital margin is tumid, well delimited from the carapace, with two distinct grooves near the outer angle. The orbits are almost circular, scarcely broader than high. Immediately below the outer angle there is a small triangular groove or gap; the lower margin of the orbits is concave in the middle and both its inner and its outer angle are dentiform, the former being larger and projecting more forward than the latter. This external lobe or angle of the infra-orbital margin (Fig. 2^a and 2^b) is a little larger than the extra-orbital angle and a little more prominent.

The fairly sharp, finely granular antero-lateral margin of the carapace is about as long as the postero-lateral and divided into four teeth, the first three of which are broad and anteriorly acuminate, the last narrow and carinated; these teeth are, however, lower and less prominent than in *Menippe Panope* Herbst, as Hilgendorf writes. The distance ($1^1/_2$ mm.) between the outer angle of the orbit and the tip of the first antero-lateral tooth measures three fourth the distance between the tips of the two first teeth and this latter measures two thirds of the distance between the tips of the second and third tooth; the tip of the third tooth finally is still slightly more distant from the fourth than from the antepenultimate. The four first teeth therefore, including the extra-orbital angle, gradually increase in length. The outer margin of the penultimate tooth runs backward and slightly inward, so that the cephalothorax presents its greatest width at the tips of these teeth; the last tooth is carinated above and the ridge that gradually diverges from the postero-lateral border, is nearly as long as the outer margin of the penultimate tooth. Just as in *Menippe Panope*, the straight postero-lateral borders strongly converge backward, so that the slightly concave posterior margin of the cephalothorax is scarcely as wide as the front.

The basal joint of the external antennae is small and even slightly more distant from the front than it is itself long; the second, much smaller joint reaches scarcely the front and the third joint is narrower than the orbital hiatus; unfortunately the flagellum is broken, but it is certainly as long as the orbits are broad. The internal antennae (Fig. 2*b*) are a little oblique, the epistome is short. The endostome is faintly ridged, the ridges being only distinct on its posterior part.

The external maxillipedes (Fig. 2*c*) are covered everywhere with a close microscopic granulation and a few fine hairs are distributed over them; they have about the same form as those of *Menippe Rumphii* from the Indian Ocean.

The fore edge of the merus-joint is slightly convex, the antero-external angle is obtuse and the outer margin is somewhat concave.

The whole under surface of the carapace, between the lateral margins and the buccal frame, presents the same close microscopic granulation as the upper surface; the granules on the internal infra-orbital lobe are a little larger and near the lower border of the orbits the surface is somewhat pitted (Fig. 2*b*).

The abdomen of the female is a little broader than that of *Menippe Panope*, it presents its greatest width at the penultimate joint and the terminal joint is semicircular; the seven joints are quite smooth, though somewhat pitted near their lateral- and anterior margins.

The chelipedes differ from those of *Menippe Panope* especially by their different granulation. They are, as in Herbst's species, massive and unequal, the right being the larger. The strongly curved upper margin of the quite short arm of the right leg, which scarcely extends beyond the lateral margin of the carapace, is rather sharp and unarmed; the anterior margin is less sharp and the lower border is rounded. The smooth inner surface of the large massive wrist fits close to the antero-lateral border of the cephalothorax and its inner angle is bluntly prominent. To the naked eye the upper and the outer surface of the wrist appear smooth and shining, but under a lens one observes just the same close microscopic granulation as on the surface of the carapace; in *Menippe Panope* Herbst, however, granules of large size, similar to those of the outer surface of the hands, are distributed over about three fourth parts of the convex upper surface of the wrist. Near the anterior margin, that articulates with the hand, the granules are a little larger. The upper surface of the wrist is moreover somewhat pitted. Hilgendorf writes me that the hand of the larger leg is one millimeter longer and a little lower than that of the type specimen of *Menippe Panope* Herbst, so that the shape of the hand is not exactly the same. The length measured horizontally is a little shorter than the greatest width of the cephalothorax and the hand is almost twice as long as high. The fingers are somewhat less than half as long as the whole hand, measured horizontally. The lower margin of the palm makes a straight line with that of the immobile finger.

According to a former information received from Prof. Hilgendorf, the granules on the middle of the outer surface of the hand are, in the species described by Herbst, $^1/_2$ mm. broad and distinctly larger than those of the upper and of the lower margin (confer: de Man, The Journal of the Linnean Soc. of London, V. 22, 1888, p. 43). In the specimen from Sanggau, on the contrary, the convex outer surface of the larger chela is covered with a not quite uniform granulation, distinctly visible, however, to the naked eye; this granulation is somewhat closer near the upper and near the lower margin of the palm than in the middle of the outer surface. On the middle the granules have but a diameter of $^1/_4$ mm., near the upper margin and at the base of the immobile finger they are a little larger, being $^1/_3$ mm. broad. Under a lens I observe moreover a close microscopic granulation on the whole outer and inner surface of the palm, as also on the lower border on which the larger granules are absent.

The outer surface of the immobile finger shows a longitudinal furrow near the lower margin and a shorter one at the base of the teeth, and the granulation disappears gradually towards the obtuse tip (Fig. 2^d); this finger bears just in the middle a strong conical tooth, on either side of which two smaller teeth are observed. The strongly curved dactylus is granular at the base and bears two rows of impressed punctures; this finger is also bluntly pointed and is armed with 7 or 8 low, obtuse teeth. The left hand is considerably smaller, its horizontal length measures indeed only two third of the greatest breadth of the cephalothorax and this hand is a little more than twice as long as high. The fingers are almost as long as the palm and more sharply pointed at their tips. The immobile finger carries five incisiform teeth that gradually decrease in size, the dactylus is less curved, distinctly grooved and its teeth are also incisiform, but lower than those of the index. The outer surface of the palm is rather uniformly covered with granules, all of about the same size, $^1/_4$ mm. broad, and between these granules one observes under a lens the microscopic granulation. The lower border of this hand is a little concave in the middle. The wrist and the arm agree with those of the other leg, also with regard to the granulation.

The short ambulatory legs resemble those of *Menippe Panope.* Their joints are smooth on the outer surface, only a little punctate, but their anterior margin is finely granular; the margins are a little hairy, mostly those of the terminal joints that end into sharp horny claws.

The fingers of the chelipedes are dark brown, excepted at the base, with white tips. The cephalothorax, preserved in alcohol, has a light yellowish brown hue, without a trace of the small red spots with which *Menippe Panope* is mottled.

Menippe convexa Rathb., from Honolulu, seems to be a closely allied species, but the anterior portion of the mesogastric region is defined and the median lobes of the front are small, separated by a shallow groove, characters not observed in *Menippe Ortmanni*. The habitat is moreover quite different.

Measurements in millimeters:

Greatest breadth of the cephalothorax	$19\frac{1}{3}$
Length in the median line of the carapace	14
Thickness of the cephalothorax	$9\frac{1}{2}$
Distance between the internal orbital angles	$5\frac{2}{3}$
„ „ „ external „ „	$10\frac{1}{3}$
Breadth of the posterior margin	5
Breadth of the orbits	$2\frac{1}{5}$
Height „ „ „	2
Horizontal length of the larger chela	17
„ „ „ „ fingers	7
Height of the larger chela	9
Horizontal length of the smaller hand	$12\frac{1}{2}$
„ „ „ „ fingers	6
Height of this hand	6

Genus *Potamon* Sav.

Subgenus *Parathelphusa* H. M. E.

Potamon (*Parathelphusa*) *tridentatum* H. M. E.

(Plate 5, fig. 3).

Parathelphusa tridentata H. Milne Edwards, in: Archives du Muséum, Tome VII, p. 171, pl. 13, fig. 1. — von Martens in: Archiv für Naturgeschichte, Jahrg. 34, 1868, p. 19. — de Man, in: Notes from the Leyden Museum, Vol. I, 1879, p. 61.

15 specimens were collected, viz.:

1 female at Sanggau.

6 specimens (2 ♂♂, 4 ♀♀) without definite locality though probably from Sintang.

2 males and 1 female from the southern foot of Mount Kenepai, collected in December 1893.

2 young males from Nanga Raoen.

2 young males from the forest near the small Siniai river, captured in March 1894, and finally

1 young female collected by Dr. Nieuwenhuis at Bloe-oe, a locality situated on the Upper Mahakkam.

Not one of all these specimens may be considered to have attained its full growth: the cephalothorax of the largest individual, a male from Mount Kenepai, is 49 mm. broad, but the female from the Solor-Islands, that has been mentioned in my paper quoted above, was 70 mm. broad. The proportion between the width and the length of the cephalothorax appears to be somewhat variable in this species. In the specimen figured by Milne Edwards (l. c.) the proportion is as 23 : 19. Just the same proportion is shown by the female from Sanggau and by a younger female from Buitenzorg, Java, in my own collection: in both the form of the carapace fully agrees with the figure in the »Archives du Muséum." In all the other specimens, however, the cephalothorax appears a little broader, the proportion between width and length being as 23 : 18. In the old female from the Solor-Islands the cephalothorax was 70 mm. wide and 52 mm. long, the proportion between both therefore as 23 : 17, but this may be a consequence of the large size of this specimen.

Almost in all those individuals in which the proportion between width and length of the cephalothorax is as 23 : 18, the tip of the first epibranchial tooth is a little less distant from the external orbital angle than from the tip of the second epibranchial tooth, that seems to be usually the case in this species (de Man, l. c. p. 64); in the female from Sanggau, however, as also in that from Buitenzorg, the cephalothorax of which specimens is less enlarged, the distance between the tips of the two epibranchial teeth appears a little shorter than the distance between the tip of the first epibranchial tooth and the outer angle of the orbits. I presume that these both characters coincide.

Von Martens (l. c.) says that in his specimens from Borneo the extra-orbital tooth presented a »zwar abgerundeten und stumpfen, aber doch deutlich begrenzten Vorsprung", that he considered as homologous to the first epibranchial tooth of *Parathelphusa sinensis.* In the specimens now lying before me no trace of such a prominence is perceptible.

According to the same author the penultimate segment of the male abdomen should be about once and a half as long as broad, but in the present specimens it is but slightly longer than broad. In the older specimens the lateral margins of that segment show a small blunt prominence (Fig. 3), so that it appears here broadest; behind these prominences the lateral margins run parallel with one another. In the largest male, that from Mount Kenepai, the penultimate segment (Fig. 3) appears at the two prominences only for one ninth part, and behind them for one sixth less broad than it is long.

In two specimens without definite locality; viz. in the male specimen N° 4, measured below, and in a female, the ambulatory legs are a little more slender as is ordinarily the case: this species therefore varies also in this character.

Cephalothorax and legs of most specimens have a dark olive-green colour, sometimes with a reddish hue, as especially in the female from Sanggau; the fingers are darker, often blackish with reddish yellow tips.

Measurements in millimeters:

	1	2	3	4	5	6	7	8.
	♂	♀	♀	♂	♀	♂	♂	♀
Greatest width at the tips of the last epibranchial teeth.	48½	46	39¼	42	39¼	33	24½	32
Length of the carapace, the abdomen excluded	38	37	32	33	31¼	26	19	26

Measurements in millimeters:

	1	2	3	4	5	6	7	8.
	♂	♀	♀	♂	♀	♂	♂	♀
Length of the penultimate segment of the abdomen	9			7⅗		6	4½	
Breadth of the anterior margin of this segment	6½			5⅕		5	4¼	
Breadth at the two prominences. .	8			6½		5⅔	4⅔	
Breadth just behind the middle . .	7⅔			6		5⅗	5⅕	
Breadth of the posterior margin. .	8			6½		5⅚	5½	
Length of the meropodites of the penultimate legs	21	20	18½	20	17	15¼	11	14
Breadth of the meropodites of these legs	6⅕	6	5½	5!	5⅓	4⅙	3⅓	4⅔

N°s 1 and 2 Mount Kenepai, N° 3 Sanggau, N°s 4 and 5 without definite locality, N°s 6 and 7 Siniai River, N° 8 Java, Buitenzorg.

Parathelphusa tridentata has been recorded from Sumatra: Lahat (v. Mart.); Java (v. Mart., Heller, de Man, Ortm.): Soerabaya (v. Mart.), Buitenzorg (de M., Ortm.); Borneo: Singkawang (v. Mart.); Timor, Bavian Islands, Solor Islands (de M.).

Perithelphusa, n. subg.

I propose this new subgenus for *Potamon borneense* v. Mart. and two new species described in this Report. It is characterized by the existence of one single, well-developed, acute, spiniform epibranchial tooth, and by the post-frontal ridge being as little developed as in the subgenus *Geothelphusa*. In these three species the male abdomen has the same form, its sides converging from the base of the third to the apex of the fifth segment, thence to its extremity narrow. The meropodites of the chelipedes bear a sharp spine on their superior margin, just behind the distal extremity; the lower surface of these joints is smooth, without a tubercle near the carpal articulation and having the margins entire, not tubercular.

This new subgenus forms a remarkable transition to the subgenera *Parathelphusa* and *Geothelphusa*. It differs from the former by the existence of only one single epibranchial spine and by the absence of a postfrontal ridge, for in *Parath. spinigera* White, the only form with one epibranchial tooth, the lateral portions of the postfrontal crest are well-developed and sharp. *Perithelphusa* may be distinguished from *Geothelphusa* by the well-developed epibranchial spine and by the existence of a spiniform tooth on the upper angle of the arms of the anterior legs.

Potamon (*Perithelphusa*) *borneensis* v. Mart. var. *hilaris* n.

(Plate 5, fig. 4).

Thelphusa borneensis von Martens, in: Archiv für Naturgeschichte, 34 Jahrg., 1868, p. 18.

Five specimens (3 ♂♂, 2 ♀♀) were collected by Max Moret at Sintang.

The two females, though adult, carry no eggs.

This interesting species bears some general resemblance to *Parath. spinigera* White from Calcutta, but differs by the absence of the postfrontal ridge. It appeared to me probable that either this species or one of the two following might belong to *Potamon borneense* v. Mart., and therefore one male specimen of each was sent to Prof. Hilgendorf at Berlin, who, after a close examination, wrote me the following about the species which I go to describe: »Diese Form kann zur Noth mit *T. borneensis* zusammengebracht werden. Ich würde aber doch jedenfalls eine Varietät daraus machen". The individuals described by von Martens have been collected near Seminis in the Sampasbasin and at Lempai near the lake of Danau Sriang, in the Upper-Kapoeas-basin, in the same region therefore as our specimens. The specimen sent to Berlin, was the male N° 2.

Our specimens are of a larger size than those of von Martens, the cephalothorax of the largest individual is one third broader than that described in the »Archiv für Naturgeschichte". As is proved by the measurements, the proportion between the greatest width and the length of the cephalothorax is somewhat variable in our specimens, but in all these the cephalothorax appears, however, slightly more enlarged than in the type with which our specimen was compared. The carapace is little enlarged, the greatest width is in proportion to the length as 4:3 and is observed just behind the epibranchial teeth, on the limit of the foremost third of the upper surface. The upper surface is somewhat convex from before backwards, less so, although still distinctly, from side to side. The mesial crescentic portion of the cervical groove is distinct and moderately deep, excepted just in the middle, but the lateral portions are interrupted (Fig. 4); the median part of the semicircular groove is just twice as far distant from the free border of the front as from the posterior margin of the carapace. The anterior lateral portions between the gastric region and the anterior branchial one are two rather deep, oblique furrows, that in the adult end about 4 mm. short of the notch that bounds the epibranchial tooth anteriorly. A post-frontal crest cannot be said to exist as it is only represented by the wrinkled and rugose slope, with which the gastric region subsides towards the front and the post-orbital furrow. The epigastric portion, however, is more or less distinct and slightly bent forwards; the mesogastric furrow is linear, very narrow and shallow, not continued on to the front nor backwards and not bifurcating, so that the anterior extremity of the mesogastric area, in other species well-defined, is not at all distinct.

The anterior branchial region is moderately swollen, scarcely marked off from the posterior one; shallow depressions separate the posterior branchial and the cardiac regions from the intestinal, but the cardiac region is scarcely limited off laterally. The small, somewhat wrinkled urogastric areolets are not contiguous, but separated from one another by an interspace almost as broad as the areolets themselves.

The upper surface of the carapace appears under a lens very finely punctate, the punctation is rather close, somewhat less so on the cardiac and mesogastric areae than elsewhere; on the front and behind the orbits the puncta are coarser. The gastric region is quite anteriorly, as well on the epigastric lobes as on the slope towards the postorbital furrow, distinctly wrinkled and foveate. The lateral margin of the cephalothorax is covered, from the epibranchial tooth till the posterior margin, with oblique raised lines and is posteriorly slightly concave. For the rest the surface of the cephalothorax appears smooth and shining to the naked eye.

The front is obliquely deflexed, the anterior border is straight in the middle, or, as in the youngest male and in the youngest female, very slightly concave. In the type described by von Martens the free border is a little curved upward, so that the upper surface of the front appears slightly concave; this is also the case in the youngest male, but in the other specimens not or scarcely so. The free border curves into the very oblique inner somewhat raised portions of the upper orbital margins, or the frontal angles are at least very obtuse and rounded; the frontal margin measures about one fourth the greatest width of the cephalothorax, — it is somewhat difficult to measure exactly its breadth, — according to von Martens, however, one third. The distance between the free border of the front, near its outer angles, and the epigastric lobes is scarcely half as long as the former is broad. The front appears considerably broader at its base than at its free border.

The external orbital angles are moderately sharp and reach as far or almost as far forwards as the free border of the front, but not beyond it; the distance between them measures three fourth or little more than three fourth the length of the cephalothorax. The outer margin of the extraorbital tooth makes a right angle with the upper margin of the orbits. The epibranchial tooth or spine, directed straightly forward or slightly inward, is, as in *Parath. spinigera,* widely distant from the external orbital angle, the distance between the latter and the tip of the epibranchial spine measuring about one fourth the whole length of the lateral margin. The base of the epibranchial tooth is about as far distant from the outer angle of the orbits as the epistome is broad, but in the type of von Martens the epistome is somewhat broader than that distance.

The epibranchial spine is strong, acute and salient, has a black point and is bounded anteriorly by a deep notch. The slightly sinuous outer margin of the extraorbital tooth makes with that notch an obtuse rounded angle, but in the type described by von Martens this angle is less distinctly marked on one side, faintly so on the other, the margin curving more regularly towards the base of the tooth. The posterior margin of the cephalothorax which is a little concave is, in the adult, almost twice as broad as the free border of the front, in the younger specimens somewhat shorter.

The small orbits (Fig. 4^a) are almost transverse, they are once and a half as broad as high and their width measures two thirds of that of the frontal margin. The outer margin of the extraorbital teeth, the upper and the lower margin of the orbits and the free border of the front are smooth, entire. The somewhat sinuous infraorbital margin has no hiatus near the outer angle and the obtuse inner .angle is small, little prominent; the interspace between this angle and the front is wide. According to Hilgendorf the cornea of the eye-peduncles should be slightly larger and the distance between the free border of the front and the posterior margin of the epistome somewhat shorter than in the Berlin type: in the adult specimens this distance is half as long as the free border of the front is broad. The anterior margin of the epistome, the surface of which is smooth, is as far distant from the frontal margin as from the tip of the triangular process that the posterior margin of the epistome sends backwards and downwards; on either side of this median tooth, the smooth posterior margin shows still another smaller, less prominent tooth, so that it is twice notched on each side.

The subhepatic area is limited off from the branchial floor by a finely granular transverse line and both regions are beset with oblique raised lines or rugae, that are also finely granular and as usual reach to the postero-lateral margins. The groove between the hepatic region and the branchiostegite is rather deep, especially anteriorly; one observes on the latter, near that groove, a few oblique rugations, but it is for the rest smooth.

The ischium-joint of the outer foot-jaws appears finely punctate under a magnifying glass, the longitudinal furrow on it is deep and runs close to and parallel with the inner margin. The merus-joint is somewhat broader than long, its antero-external angle is obtusely rounded; this joint appears also punctate under the lens and somewhat rugose at its postero-external angle, the punctation, however, is in some individuals rather indistinct.

The sternum and the abdomen of the male are smooth, though appearing finely punctate under a lens. There is at the anterior extremity of the sternum, between the posterior margins of the maxillipedes, a transverse furrow or impression, but there are no ridges on the sternum near the insertion of the chelipedes. In this species the distance between the anterior extremity of the ischial furrow and the outer margin of the ischium-joint appears a little broader than the distance between the anterior extremity of the abdominal cavity and the posterior margin of the buccal frame. Prof. Hilgendorf made me acquainted with this character.

The male abdomen bears some resemblance to that of *Potamon* (*Geothelphusa*) *loxophthalmum* de M. (de Man, in:

Notes from the Leyden Museum, 1892, pl. 9, fig. 3 c). The terminal joint is obtusely rounded and the sides are slightly concave. The sixth segment is a little longer than the seventh, the straight anterior margin is just as broad as the concave posterior one and measures little more than two thirds of the length of the joint, so that the latter is almost once and a half as long as broad. Just behind the anterior margin, the sides of this segment slightly bulge out laterally, so that it shows here its greatest breadth and in the type of Berlin the sixth joint is very slightly shorter than in our specimens. The antepenultimate joint is a little more than half as long as the sixth and exactly half as long as the posterior margin of it is broad. The closely punctate abdomen of the female has the usual form, the posterior border of the terminal joint is $2^1/_2$ times as broad as this joint is long.

The chelipedes are greatly unequal in the males, but subequal in the female (the younger female has lost all its legs) and in all the right leg is the larger. The arms project but little beyond the lateral margin of the cephalothorax. The upper edge is rugose and bears, just behind the constriction at its distal end, a sharp spine as usual in this subgenus; in the type examined by Hilgendorf it appears less slender, but it is probably worn off, as is also the case on the larger chelipede of the youngest male. The outer surface is covered with transverse rugosities, but the lower is smooth and bears no tooth or spine near the anterior margin; the anterior and the ventral angle are not rounded off, as is the case in *Parath. spinigera.* The upper surface of the carpopodites is faintly rugose and appears finely punctate under a lens; these joints are armed with a single stout spine at the inner angle. In the adult male the larger chela, measured horizontally, is just as long as the cephalothorax is broad, but in the younger males one fourth shorter. The fingers, measured horizontally, are as long as, but never shorter than the palm, that is almost just as high as long. The lower margin of the palm is convex and makes thus no straight line with the index. The convex outer surface of the palm is covered with extremely shallow, small depressions or foveae, giving it a reticulate appearance and the interspaces between them show, under a magnifying, glass, a minute granulation; one observes under a lens also a fine punctulation, more distinctly in the younger males than in the adult. The slightly compressed fingers are moderately slender and leave, in the adult, a narrow interspace between them when closed; they are covered, from their base untill the pointed extremities, with an extremely fine and close granulation, hardly visible to the naked eye. The fingers are not at all grooved, the fine puncta, however, are arranged more or less distinctly in longitudinal rows. The dactylus is somewhat curved and both fingers are multidentate; the immobile finger (Fig. 4^d) is armed with about 20 small conical and unequal teeth of which the fifth and the eighth are somewhat larger and more prominent than the others. The teeth of the dactylus are a little smaller, also unequal; one in the middle is larger than the rest.

The smaller chela of the adult male is, horizontally measured, just as long as the cephalothorax and twice and a half as long as high; the fingers are a little longer than the palm, in contact throughout their length and the dactylus is less curved. In its other characters this hand agrees with the other.

Unfortunately in the adult female the immobile finger of the right hand, that is but very slightly larger than the other, is broken off and in the other female all legs are lost. The hands are much smaller than in the male, the horizontal length of the right chela measures three fourth the length of the carapace, the other is only 2 mm. shorter; the fingers of the right hand are about as long as the palm, in the other they are slightly longer. The teeth are smaller, but for the rest they resemble the hands of the male.

In the type of *Pot. borneense* in the Berlin Museum the larger chela is less stout and palm and fingers are less high than in our specimens, but the type has a smaller size, as was already observed. The ambulatory legs are of moderate length, so e. g. those of the penultimate pair of the adult male are 60 mm. long, i. e. almost once and a half as long as the cephalothorax is broad; the meropodites are nearly three times as long as broad, their outer surface is granular, their upper margin is rugose and provided near the distal end with a sharp spine. The propodites of the penultimate legs are in the middle scarcely half as broad as long and in the adult the dactylopodites are somewhat longer. The ambulatory legs are glabrous. In the type these legs appear, as Prof. Hilgendorf wrote to me, a little more slender. The cephalothorax of our specimens preserved in alcohol, has above an olive-green or yellowish-green colour and is mottled with innumerable small red spots, the fronto-orbital margin and the epibranchial tooth are yellow. The chelipedes and the other legs present above the same green colour and spots, but on the chelipedes the latter are a little larger than on the carapace. The lower surface of the latter and of the legs is yellow and devoid of spots. In the type specimen at Berlin the small red spots are completely wanting.

Parathelphusa spinigera White (Confer: Wood-Mason, in: Journal Asiatic Soc. of Bengal, Vol. XL, Pt. II, 1871, p. 194, Pl. XII, Figs. 1—4) bears some resemblance to *Potamon borneense*, but is certainly different. I studied two specimens of that species during my last visit to the British Natural History Museum in 1896. The cephalothorax is more enlarged, that of an adult male from Calcutta is 59 mm. broad and only 39 mm. long. The post-frontal ridge is better defined, its lateral portions especially are cristiform and sharp; the free border of the front is slightly concave. The male abdomen has a different form, the penultimate or sixth joint is more quadrate, for in the adult male from Calcutta, that I examined, it is 8¼ mm.

long and the anterior and the posterior margins are respectively 6½ mm. and 7¾ mm. broad. The immobile finger of the larger chela has a different shape, being higher at the base and the meropodites of the ambulatory legs bear no spine near the distal end of their upper margin.

Measurements in mm.:

		♂	♂	♂	♀	♀
Greatest width of the cephalothorax. .		41	35½	34½	40½	36½
Length ″ ″ ″		32	27½	25½	31	29
Distance between the outer orbital angles.		24½	22½	21	24½	21½
Distance between the tips of the epibranchial teeth		39½	34	31½	38½	34½
Distance between the tip of the epibranchial tooth and the external orbital angle		9	7½	6½	8½	7½
Breadth of the free border of the front.		10	9	8½	10	9
Distance between the free border of the front near its outer angles and the epigastric lobes		4½	4	3½	4	4
Distance between the frontal margin and the posterior boundary of the gastric region		20½	18	16½	20	18
Width of the posterior margin of the carapace		18	15½	14½	18½	17
Width of the orbits		6½	6	5½	6½	6
Height ″ ″ ″		4½	4	3½	4½	4
Distance between the free border of the front and the tip of the median tooth of the epistome		5	4	4	5	5
Length of the terminal joint of the abdomen		6	5½	5		
Length of the penultimate joint . . .		7	6½	5½		
Breadth of the anterior margin of this joint		5	4½	4¼		Wanting.
Breadth of the posterior margin . . .		5	4½	4		
Horizontal length of the larger hand .		39	27	26	24	
″ ″ ″ ″ fingers . . .		19½	13½	13½	12	
Height at the articulation of the fingers.		18	12½	12½		
Length of the meropodites . .	of the penultimate legs.	18½	16½	15½	15	Wanting.
Breadth ″ ″ ″ . .		6½	6	5½	5	
Length of the propodites, in the middle.		10	9½	9	8	
Breadth of the propodites, in the middle		4½	4	3¾	3½	
Length of the dactylopodites .		13½		8½	10½	

Potamon (*Perithelphusa*) *Büttikoferi*, n. sp.

(Plate 6, fig. 5).

Four males of different size from Sintang, collected by Max Moret.

This new species bears some resemblance to the preceding one: the meropodites of the ambulatory legs present a spine on their anterior margin and the upper angle of the arm of the chelipedes also, the abdomen has about the same form and as regards the postfrontal ridge, as little defined, both species agree with one another. Therefore this species, that I have the pleasure to dedicate to the Zoologist of the Expedition, may be likewise referred to *Perithelphusa*. The second male has been compared by Prof. Hilgendorf with the type of *Potamon borneense* v. Mart. and he wrote me that he considered this species to be new.

As in *Pot. borneense* v. Mart. var. *hilaris*, the greatest width of the cephalothorax is in proportion to its length as 4:3, but the distance between the epibranchial teeth and also that between the outer orbital angles are in proportion to the greatest width a little shorter and as the lateral margins have a different form and direction, the cephalothorax of both species presents a different shape and figure.

As regards the convexity of the carapace, as well from end to end as from side to side, both species almost agree with one another; in the largest specimen the gastric region appears slightly less convex transversely but this may be an individual difference. Concerning the little development or rather absence of a post-frontal ridge, both also agree with one another; it is only indicated by the slope, by means of which the gastric region subsides towards the front and towards the post-frontal furrow. The epigastric lobes are slightly advanced, wrinkled anteriorly, not limited off posteriorly, but continuous with the gastric region; the declivous lateral parts are coarsely punctate, scarcely wrinkled. The cervical groove is interrupted, just as in the preceding species and in both equally far distant from the anterior margin of the front; the posterior, median, crescentic portion is deep, the anterior portions are just as deep as in *Pot. borneense* var. *hilaris*, but their direction is less oblique: these furrows, indeed, when continued backwards would form a right angle with one another in the preceding species, but an acute one in *Potamon Büttikoferi.* The gastric region is not subdivided and even the anterior prolongation of the mesogastric area is not defined, the mesogastric furrow being short and not bifurcating; the antero-external parts of the gastric region appear, in the adult, somewhat wrinkled, the ramifying wrinkles diverge from the anterior branches of the cervical groove, in the younger individuals these wrinkles are less conspicuous. The urogastric areolets agree with those of *Pot. borneense*, and shallow depressions separate the anterior branchial lobe from the posterior one, that is considerably smaller, and the latter from the cardiac region.

The front presents distinctly a broad, shallow bay that extends till the rounded lateral angles; which pass with a curve into the upper margin of the orbits, so that it is here also somewhat difficult to measure exactly the breadth of the free border of the front: it is about one fourth the greatest width of the carapace. The somewhat raised lateral margins of the front are slightly less oblique than in *Pot. borneense* var. *hilaris*, so that the front appears at the base a little less broad in proportion to the width of the frontal anterior margin. Just before the foveate epigastric lobes the surface of the front is marked with a few transverse rugosities, but for the rest it is coarsely punctate. The supra-orbital margins are sinuous and form almost right angles with the outer margin of the extraorbital tooth; the outer angles of the orbits are moderately sharp and reach almost as far forward as the free border of the front. The epibranchial teeth are widely distant from the external orbital angle, though the distance between the latter and the tip of the epibranchial tooth is a little shorter than in the preceding species, measuring in the adult male one sixth the length of the whole lateral margin. The outer border of the extraorbital tooth is in most specimens almost straight, with no obtuse angle in front of the notch that separates it from the epibranchial tooth; the third male, the carapace of which is $30^1/_2$ mm. broad, resembles, however, in the form of this outer border, *Pot. borneense* var. *hilaris*. The epibranchial tooth is acute, with a brown point, directed forward and slightly inwards, but these teeth are somewhat smaller than in the other species. Otherwise as in the latter, in which the distance between the epibranchial teeth is almost as large as the greatest width of the cephalothorax, the lateral margin runs, behind the epibranchial tooth, obliquely outwards so that the branchial lobe bulges out laterally with a convex outer margin; the greatest width of the cephalothorax is situated along a line dividing the anterior from the middle third of the upper surface. The oblique raised lines on the slightly concave postero-lateral margins are a little less numerous but more salient than those of the variety *hilaris* of the preceding species. The whole upper surface is finely and closely punctate, on the cardiac and mesogastric areae the minute puncta are less numerous. The posterior margin of the cephalothorax is, at least in the adult male, a little less broad with regard to the greatest width of the cephalothorax than in *Pot. borneense* var. *hilaris*.

The orbits are small, slightly oblique in a front view and little broader than high; in a front view the sinuous course of the upper margin is well visible, the lower margin is regularly curved, without a notch or hiatus near the outer angle and the obtuse inner angle is very small, scarcely prominent and widely distant from the front.

The nasal plate is somewhat broader, but less high than in the preceding species, the epistome has about the same form, but the median tooth is obtuse. As in that species the subhepatic region is limited off from the branchial floor by a distinct transverse furrow and with regard to the wrinkles and rugosities on the lower surface of the cephalothorax both species agree.

The ischial line of the external maxillipedes has the same situation and direction as in the preceding form and also with regard to their other characters the outer foot-jaws agree, but the merus-joint is slightly less enlarged with regularly rounded anterolateral angle.

In the male of *Pot. borneense* var. *hilaris* the abdominal cavity reaches as far forwards as a line uniting the outer angles of the buccal frame and there are no impressions or only very slight ones between these angles and the end of the cavity; in *Pot. Büttikoferi*, however, the cavity reaches not so far forwards and the sternum bears, just before its extremity, a rather deep transverse furrow between the outer angles of the buccal frame, in front of which one sees, in the angle of the sternum, the same transverse groove that also exists in *Pot. borneense* var. *hilaris*, and equally there are no ridges near the insertion of the chelipedes. The distance between the anterior end of the ischial line of the external maxillipedes and the external margin of the ischium is a little shorter than that between the anterior extremity of the abdominal cavity and the oblique posterior margins of the buccal frame, in *Pot. borneense* var. *hilaris*, however, a little broader. The sternum is smooth, punctate. The male abdomen has the same form as in the preceding species, but the penultimate segment is comparatively shorter, being but very slightly longer than the terminal; the lateral margins have the same form and direction in both and the punctation is the same.

The chelipedes are very unequal, in the largest male the left is the larger, in the others the right. The meri project as little beyond the carapace as in *Pot. borneense*, the upper margin carries a rather small spine or tooth, that is acute in the two youngest individuals, but worn off in the two others. For the rest the meri resemble those of *Pot. borneense*, the angles of the flattened lower surface being moderately sharp, not rounded and this surface presenting no trace of a spine or tubercle. The wrist carries above oblique rugosities and wrinkles and is armed at the inner angle with a rather short, but stout spine. In the largest specimen the large chela is almost as long, measured horizontally, as the cephalothorax is broad, in the others it is comparatively shorter, so that in the youngest individual it measures only two thirds of the greatest width. In the adult male the somewhat compressed fingers that leave an interspace between them, when closed, meeting only at the pointed tips, are almost once and a half as long as the palm; they have about the same height, in *Pot. borneense* var. *hilaris*, however, the index is higher at the base than the dactylus. This finger is armed near the articulation with a strong tooth, that bears a few smaller ones and between this tooth and the extremity 9 or 10 very small teeth are observed. The somewhat curved dactylus carries in the middle a conical tooth, much smaller than the strong tooth of the immobile finger and a few very small teeth stand on either side of it. The fingers are smooth, punctate, on the middle the puncta form a longitudinal row. The convex palm is, at the articulation of the fingers, a little higher than it is long, measured horizontally; it appears smooth to the naked eye, but presents under a lens the same structure as the palm of the larger hand of the preceding species. The lower margin of this chela is slightly concave in the middle.

In the younger males the fingers are as long as the palm, that is about as high at the articulation of the fingers as it is long; the fingers are almost in contact with one another, the toothing is about the same as in the adult. The longitudinal rows of puncta are still more distinct, so that the fingers appear faintly grooved. Under a strong lens a similar close and fine granulation is shown by *Pot. borneense* var. *hilaris*, the palm presenting fine reticulating lines that are minutely granular.

The smaller hand of the adult male measures scarcely three fourth the width of the cephalothorax, the fingers are but little longer than the palm and almost in contact with one another. In the younger specimens the smaller chela is still shorter, so in the youngest male it is little more than half as long as the cephalothorax is broad.

The ambulatory legs are comparatively as long as in the preceding species and are also quite glabrous, but they are more slender. So e. g. the legs of the penultimate pair are almost once and a half as long as the cephalothorax is broad, measuring 56 mm. in the adult male. The upper margin of the meropodites terminates into an acute tooth and the outer surface is granular, excepted those of the last pair; they are slender, so e. g. those of the penultimate pair are a little more than 3 times as long as broad, the propodites are $2^{1}/_{2}$-times as long as broad, in the middle, and the stout terminal joints are somewhat longer than the propodites. The upper surface of carapace and legs is mottled with similar small spots of a red colour as in *Pot. borneense* var. *hilaris*.

Measurements in millimetres:

	1	2	3	4
Greatest width of the cephalothorax.	39	33	30½	22
Length " " "	28¼	25	23	17
Distance between the external orbital angles . . .	21½	19½	18½	14
" " the tips of the epibranchial teeth.	32	28½	26	19½
" " the tip of the epibranchial tooth and the external orbital angle.	6	5½	4½	3½
Breadth of the free border of the front	9	8	7¾	6
Distance between the free border of the front near its outer angles and the epigastric lobes . . .	3½	3	3	2¼
Distance between the free border of the front and the posterior boundary of the gastric region. .	18	15½	14½	11
Width of the posterior margin of the cephalothorax.	15	14	12½	10
Width of the orbits	6	5½	5	4
Height " " "	4½	4	3½	2¾

		1	2	3	4
Distance between the anterior frontal margin and the tip of the median tooth of the epistome. .		$3\frac{3}{4}$	$3\frac{1}{2}$	$3\frac{1}{4}$	$2\frac{1}{3}$
Length of the terminal segment of the male abdomen.		$5\frac{1}{2}$	$4\frac{2}{3}$	$4\frac{1}{4}$	$3\frac{1}{4}$
Length of the penultimate segment		$5\frac{2}{3}$	5	$4\frac{2}{3}$	$3\frac{1}{2}$
Breadth of the anterior margin of this segment. .		5	$4\frac{1}{4}$	4	$3\frac{1}{4}$
〃 〃 〃 posterior 〃 〃 〃 〃		5	4	4	$3\frac{2}{5}$
Horizontal length of the larger chela		$36\frac{1}{2}$	26	23	$14\frac{1}{2}$
〃 〃 〃 〃 fingers		$21\frac{1}{2}$	$13\frac{1}{2}$	$11\frac{1}{2}$	$7\frac{1}{2}$
Height of the hand at the articulation of the fingers.		$17\frac{1}{2}$	$12\frac{1}{2}$	$11\frac{1}{2}$	$6\frac{1}{2}$
Length of the meropodites	of the penultimate pair of legs.	$18\frac{1}{2}$	16	15	$11\frac{1}{2}$
Breadth 〃 〃 〃		$5\frac{1}{2}$	5	$4\frac{3}{4}$	$3\frac{1}{2}$
Length of the propodites in the middle .		$10\frac{1}{2}$	$9\frac{1}{3}$	$8\frac{3}{4}$	$6\frac{1}{2}$
Breadth 〃 〃 〃 〃 〃 〃		4	$3\frac{2}{3}$	$3\frac{1}{2}$	$2\frac{1}{2}$
Length of the dactylopodites		12	$10\frac{1}{2}$	$9\frac{1}{2}$	$7\frac{1}{3}$

Potamon (*Perithelphusa*) *silvicola*, n. sp.

(Plate 7, Fig. 6).

Four males about of the same size and two younger females without eggs, were collected in March and May 1894 in a forest near Nanga Raoen and in the following month one quite young male was captured at Poetoes Sibau.

This species is closely allied to *Pot. borneense* v. Mart. and its variety *hilaris*, and bears a great resemblance to them, but it differs more from *Pot. Büttikoferi*, at first sight by the different general outer appearance. It may be distinguished from the first named species and its variety especially 1° by the cephalothorax being a little longer in proportion to its greatest width, 2° by the different shape and length of the extraorbital teeth.

The third specimen, the carapace of which is $32^1/_2$ mm. broad, was sent to Prof. Hilgendorf at Berlin, who compared it with the type of *Pot. borneense* v. Mart. and then wrote me the differences.

The carapace is little enlarged, being little longer than three fourth the greatest width and it is constantly somewhat less enlarged than the cephalothorax of *Pot. borneense* and of the variety *hilaris*. The upper surface is a little less convex in the antero-posterior direction than in *Pot. borneense* var. *hilaris* and the posterior half viz. the cardiac and intestinal regions together with the conterminous parts of the undivided branchial region, appears rather flattened from side to side. The cervical groove is interrupted and the oblique anterior furrows have the same direction as in *Pot. borneense* var. *hilaris*, for they would make a right angle with one another, when prolonged backwards. The postfrontal ridge is as little developed as in *Pot. borneense*; the slightly advanced epigastric lobes, that are foveate anteriorly, smooth above and not limited off posteriorly from the gastric region, are well-defined, but on each side of them one observes, as in the two preceding species, only the rugose and coarsely punctate slope by which the gastric region subsides towards the post-orbital furrow. The mesogastric furrow is short and narrow, the anterior end of the mesogastric region is therefore not defined. The upper surface is finely punctate, rather closely on the branchial, cardiac and intestinal regions, but on the gastric region the puncta are less numerous; they are visible to the naked eye, the carapace, however, appears smooth and shining. The shallow depressions that bound the cardiac region are often indistinct.

The front resembles that of *Pot. borneense* var. *hilaris*. The free border measures one fourth the width of the carapace and is straight, not bayed at all; the lateral margins of the front have the same oblique direction and form obtuse angles with the anterior margin. Prof. Hilgendorf informs me that in the type of *Pot. borneense* these angles are more rounded off, so that the anterior frontal margin appears narrower, von Martens indeed says that it measures one third the width of the cephalothorax. As in the other form the mesogastric furrow is not continued on the front. The front is flattened, not concave, the free border being not curved upward; the surface is somewhat granular.

The upper margin of the orbits has the same form and direction as in *Pot. borneense* var. *hilaris* and is not sinuous, as is the case with *Pot. Büttikoferi*; it forms a right or somewhat obtuse angle with the outer margin of the extraorbital tooth. The orbits and the eye-peduncles resemble those of the variety *hilaris*, the lower margin shows no notch near the outer angle, the inner angle is obtuse and little prominent. The external angles are obtuse and reach almost as far forward as the frontal margin; they are comparatively a little less distant from the epibranchial teeth than in *Pot. borneense* and its variety *hilaris*, so that the extraorbital tooth appears shorter. In the species described by von Martens the outer margin of the extraorbital tooth, from the outer angle of the orbits till the base of the epibranchial tooth, appears distinctly longer than the orbits are broad, but in *Pot. silvicola* just as long. The outer margin of the extraorbital tooth appears in most specimens slightly convex, but in others it has the same form as in *Pot. borneense* var. *hilaris* and the notch that separates it from the epibranchial tooth is just as deep. The epibranchial teeth are acute and salient, the lateral margin curves slightly outwards, so that it appears a little more convex than is usually the case in *Pot. borneense* and its variety. The oblique wrinkles are in both species numerous and moderately salient. The front-orbital and the lateral margins of the carapace are smooth, entire.

As regards the nasal plate, the epistome, the outer maxillipedes and the pterygostomian regions, there is no difference between both species. As in *Pot. borneense* var. *hilaris*, the median tooth of the epistome is triangular, acute, there is also a granular line dividing the subhepatic from the subbranchial region and these regions as also the branchiostegite carry the same rugosities. The ischial line of the external maxillipedes is just as deep and has the same situation and direction.

The sternum shows another difference. In *Pot. borneense* and its variety *hilaris* the distance between the anterior extremity of the ischial line and the external margin of the ischium of the outer foot-jaws is always a little broader than the interspace between the anterior extremity of the abdominal cavity and the oblique posterior margins of the buccal frame; in *Pot. silvicola*, however, these two distances are equally broad. The two transverse furrows on the sternum in front of the anterior extremity of the abdominal cavity are shallow.

The abdomen has the same form as in the species that was described by von Martens.

The chelipedes of the male are very unequal, in all the left is the larger; they agree almost entirely with those of *Pot. borneense* var. *hilaris*. The upper margin of the meri bears near the distal end an acute tooth, which in the variety *hilaris* appears more spiniform. The hands resemble also those of this variety and present the same characters; the pointed fingers show, under a strong lens, the same minute granulation and rows of puncta, the toothing of the index is slightly different. The convex outer surface of the palm is smooth and shining, appears finely punctate under a strong lens, but the microscopic granulation is hardly perceptible. In the female the anterior legs are equal.

The ambulatory legs resemble those of *Pot. borneense* var. *hilaris*. The meropodites are granular on their outer surface except those of the last pair that are only punctate and their upper margin terminates into an acute tooth, the following joints are also similar in both species.

The cephalothorax of the males shows above a dark olive-green colour, marked with innumerable small spots; the margins are often ochraceous. The chelipedes are yellowish red, as also the lower surface, and like the ambulatory legs more or less distinctly spotted.

Measurements in mm.:		1	2	3	4	5	6	7
		♂	♂	♂	♂	♀	♀	♂
Greatest width of the cephalothorax. . . .		36½	33½	32½	31½	28	21¾	15¾
Length 〃 〃 〃 . . .		29	27	26	26	23	19	13¾
Distance between the ext. orbital angles . .		22¼	20½	20½	19¼	17⅓	14⅔	11½
〃 〃 the tips of the epibranchial teeth		32½	30½	29½	28½	25⅔	20½	14½
〃 〃 the tip of the epibranchial tooth and the external orbital angle		6	5¾	5¼	5½	4¾	3½	2
Breadth of the free border of the front . .		9½	9	8½	8½	7½	6	4¾
Distance between the free border of the front near its outer angles and the epigastric lobes		3½	3	3	3¼	3	2½	2
Distance between the anterior frontal margin and the posterior boundary of the gastric region		19	17½	16½	17	15		9
Width of the posterior margin of the carapace.		16	15	14½	14	14½	11½	8
Width of the orbits.		6	5½	5½	5½	4½	4	3
Height of the orbits.		4	3¼	3½	3½	3¼	2¾	2
Distance between the free border of the front and the tip of the median tooth of the epistome.		4½	4½	3⅔	3¾	3⅔	3	2
Length of the terminal segment of the male abdomen.		5¼	5	4½	4½			2½
Length of the penultimate segment. . . .		5¾	5½	5	5⅕			2⅘
Breadth of the anterior margin of this segment.		4½	4⅖	4	4			2½
〃 〃 〃 posterior 〃 〃 〃 〃		4½	4¼	4	4			2⅓
Horizontal length of the larger chela. . .		30	26	26	27	17	13	9½
〃 〃 〃 〃 fingers.		16½	13½	14	14½	9½	7	5
Height of the larger chela at the articulation of the fingers		12½	12	12½	12½	6¼	4½	3½
Length of the meropodites . .	of the penultimate pair of legs.	16½	15½	14½	14¼	13½	11	7⅔
Breadth 〃 〃 〃 . . .		5¾	5⅘	5½	5¼	4⅔	4⅕	2⅖
Length of the propodites . . .		9	9	8	8	7½	6	4¼
Breadth 〃 〃 〃 in the middle		4	4	3¾	3⅔	3⅕	2¾	1⅗
Length of the dactylopodites . .		11	10	9½	10	9	7½	5½

N⁰ 1—6 Nanga Raoen, N⁰ 7 Poetoes Sibau.

Potamon (*Perithelphusa?*) sp.

(Plate 7, Fig. 7).

One male collected, May 1894, on the Liang-Koeboeng Mountains.

This specimen, certainly a quite young one, almost fully agrees with *Pot. silvicola*, especially when it is compared with the young male from Poetoes Sibau. It differs, however, by the epibranchial tooth that is rudimentary, presenting itself only as a small obtuse prominence and furthermore by the different form of the abdomen. The terminal segment with obtuse tip and very slightly concave lateral margins is a little shorter than its base is broad; the penultimate segment is trapezoidal, about as long as the terminal. The anterior margin is very little broader, the posterior, however, almost once and a half as broad as this segment is long, so that the straight lateral margins diverge somewhat backwards.

The meropodites of the ambulatory legs are a little broader and there is no acute tooth at the distal end of their anterior margin. The free border of the front is slightly arcuate, in *Pot. silvicola*, however, straight. The chelipedes are still equal and feeble, the fingers in contact throughout their length and slightly longer than the palm are distinctly grooved longitudinally, but this is also still the case in the young male from Poetoes Sibau.

I cannot therefore decide whether this specimen belongs to another species or only ought to be regarded as a variety of *Pot. silvicola*.

Measurements in mm.:	♂
Breadth of the cephalothorax	13½
Length ″ ″ ″	12
Distance between the outer angles of the orbits	10⅓
Distance between the epibranchial teeth	12½
Distance between the outer angle of the orbit and the epibranchial tooth.	1⅗
Distance between the free border of the front and the posterior boundary of the gastric region	7⅗
Breadth of the free border of the front	4½
Breadth of the posterior margin of the cephalothorax	7¾
Breadth of the orbits	2¾
Height ″ ″ ″	1¾
Length of the terminal segment of the abdomen	2¼
″ ″ ″ penultimate ″	2⅓
Breadth of the anterior margin of this segment	2½
″ ″ ″ posterior ″ ″ ″ ″	3⅓
Horizontal length of the chelae	7⅗
″ ″ ″ ″ fingers	4¼
Height of the palm	2¾

Subgenus *Potamon* s. s.

Potamon (*Potamon*) *mahakkamense*, n. sp.

(Plate 8, Fig. 8).

One adult female, without eggs, was captured by Dr. Nieuwenhuis at Bloe-oe, a locality situated on the Upper Mahakkam, in the source-region of this river, not far from the source-region of the Upper Kapoeas.

This species bears such a striking resemblance to *Pot. sinuatifrons* H. M. E., three type-specimens of which from the Paris Natural History Museum are lying before me, that I at first hesitated to regard it as different. The three type-specimens, all males and collected by M. Leguillou during the Voyage of la Zélée, are of different size, the largest, however, is still considerably smaller than the female from the Interior of Borneo. *Potamon mahakkamense* now differs from *Pot. sinuatifrons* 1° by the extraorbital tooth being slightly longer with regard to the distance between the external orbital angles and having a more oblique direction, 2° by the characteristic granulation with which the whole upper surface of the carapace is covered. Though the specimens of *Pot. sinuatifrons* are varnished, this granulation seems, indeed, to want completely. For the rest, as regards the general shape of cephalothorax and legs, this species almost fully agrees with *Pot. sinuatifrons*.

The carapace is rather much enlarged, the proportion of its breadth to the length (the abdomen excluded) being as 4 : 3, just as in *Pot. sinuatifrons*; it is much broader at the anterior branchial regions than posteriorly and so presents a cordiform aspect. The upper surface is flattened posteriorly, moderately convex anteriorly and declivous towards the orbits and the front. The interregional grooves are very faint. The semicircular groove is shallow, in *Pot. sinuatifrons* it is deeper and the oblique lateral portions of the cervical groove are also very shallow. They reach the postfrontal ridge at the end of the lateral cristiform portions, about 5 millimeters internally to the epibranchial teeth. The mesogastric furrow is narrow, does not pass on to the front and bifurcates posteriorly into two faintly defined, parallel grooves, that are situated close together and reach only to the middle of the gastric region, so that, just as in *Pot. sinuatifrons*, the mesogastric area is not defined anteriorly. This area is rather small and in proportion to the width of the cephalothorax a little less broad than in *Pot. sinuatifrons*: in the latter species it measures about one fourth, in *Pot. mahakkamense* only one fifth the width of the carapace. The rugose urogastric areolets, that are not contiguous, are well-defined, but the depressions bounding the cardiac region are very shallow and indistinct. The anterior branchial region, twice as large as the posterior, is almost not separated from the latter; a shallow groove bounds the posterior branchial region posteriorly, just in front of a raised line, that runs close to and parallel with the lateral parts of the posterior margin and that ends above the legs of the fifth pair. The distance between the external orbital angles measures little more than half the breadth of the carapace. The free border of the front (Fig. 8^b), that, like the upper margins of the orbits, is obscurely crenulated, measures scarcely one fourth the width of the carapace; it shows in the middle a broad shallow bay, which is about half as broad as the frontal margin, but which, in *Pot. sinuatifrons* (Fig. 9^a) is a little less broad; the lateral sinuses are almost indistinct. The outer angles of the front are moderately sharp, the lateral margins are a little oblique, slightly divergent; they make, however, right angles with the contiguous parts of the free border, because the latter are somewhat oblique. The lateral margins of the front curve regularly into the external portion of the orbital margin and these external portions run somewhat obliquely forwards.

The interrupted post-frontal ridge resembles that of *Pot.*

sinuatifrons. The internal portions, bounding the slightly declivous epigastric lobes, are placed a little in front of and quite separate from the lateral portions; the internal portions are about as broad, taken together, as the free border of the front and are not cristiform, but only rugose and wrinkled. In *Pot. sinuatifrons*, however, they are more or less cristiform. The lateral portions are cristiform, obscurely crenulate, almost straight; they extend a little beyond the outer angles of the orbits, but stop then abruptly, at a distance of about 5 millimetres internally to the epibranchial teeth, at the end of the cervical groove. Between this spot and the epibranchial tooth one observes four or five rounded granules. The postfrontal ridge is rather far distant from the free border of the front and from the orbits; the distance between the former and the internal portions measures, in the median line of the carapace, 5 millimetres, so that the front is nearly three times as broad as long. Just as in *Pot. sinuatifrons*, the trapezoidal epigastric lobes are bounded posteriorly by shallow furrows, but they are less distinct.

The obscurely denticulate outer margin of the extraorbital tooth is nearly straight and makes almost a right angle with the contiguous portion of the upper margin of the orbits; this margin has a much more oblique direction than in *Pot. sinuatifrons* (Fig. 8 and Fig. 9). The extraorbital tooth is slightly concave above and the outer angles of the orbits are moderately sharp; they reach almost as far forwards as the free border of the front. The epibranchial tooth is also moderately sharp, but small and little prominent; these teeth are placed, just as in *Pot. sinuatifrons*, a little before the postfrontal ridge, so that a line uniting them passes along the upper margin of the orbits. The epibranchial tooth is comparatively farther distant from the outer angle of the orbits, i. e. the outer margin of the extraorbital tooth is comparatively longer than in *Pot. sinuatifrons.* The distance between the epibranchial tooth and the outer angle of the orbits measures justly one sixth, in *Pot. sinuatifrons,* however, only one ninth of the distance between the outer angles of the orbits, and that distance between the two teeth measures in *Pot. sinuatifrons* about one third the breadth of the orbits, but in our new species it is a little more than half as long as the orbits are broad. The small epibranchial tooth passes into a regularly curved, slightly raised and obscurely granulate or denticulate crest, that ends about at the level of the posterior boundary of the gastric region, so that the cephalothorax presents its greatest width a little in front of the limit of the anterior third of the upper surface. The postero-lateral margins are straight, rounded and converge as much backwards as in *Pot. sinuatifrons*; the posterior margin of the cephalothorax finally is slightly concave and measures about one third the breadth of the cephalothorax.

The whole upper surface appears slightly granulate. The upper surface of the front is densely covered with small, little prominent granules, about $^1/_3$ mm. broad; similar, though somewhat smaller granules are seen between the orbits and the postfrontal ridge. The anterior branchial area is densely beset, just behind the epibranchial tooth, with granules similar to those of the front and these granules pass gradually backwards into short, granulated, oblique rugae that rather densely cover the lateral margin of the carapace; they are longest and most distinct near the middle of the lateral margin and become gradually smaller backwards. Near the cervical and branchio-cardiac grooves the granules and short raised lines gradually grow smaller, more flattened and scarcely prominent at all. Flattened, partly confluent and coalescent granules are observed on the epigastric and protogastric areae and these granules become likewise smaller, more flattened and less salient posteriorly and on the cardiac and intestinal regions. To the naked eye, however, the granulation is visible over the whole upper surface of the carapace.

In the type-specimens of *Pot. sinuatifrons*, on the contrary, the upper surface appears almost everywhere smooth, there are only small granules on the front and on the extra-orbital tooth, while oblique rugae cover the lateral margin of the carapace.

The orbits are transverse, almost twice as broad as high and their width measures two thirds the breadth of the frontal margin; the lower border that is obscurely crenulate and more curved than in *Pot. sinuatifrons*, presents, as in this species, just below the outer angle of the orbits, a small triangular hiatus.

The epistome almost agrees with that of *Pot. sinuatifrons*. It is smooth, like its anterior and posterior margin; the process in the middle of the latter is formed chiefly by the median palatal ridge. The lobe at the anterior extremity of the lateral margins of the buccal frame appears regularly curved and distinctly crenulate in *Pot. sinuatifrons*, but in the new species it is angular and quite smooth (vide Fig. 8^a and Fig. 9^c).

The subhepatic region is marked in the middle with a transverse row of granules that are partly confluent and so constitute a rather salient, transverse ridge, some other granules are lying around it. The floor of the branchial chamber is densely covered with finely granulated, short oblique rugae and is distinctly defined by a groove from the subhepatic region; the branchiostegite is rugose externally and a row of small granules is seen along the furrow that separates it from the subhepatic area.

The outer maxillipedes fully agree with those of *Pot. sinuatifrons*. The furrow on the rather densely punctate ischium-joint runs a little closer to the internal than to the external margin and proceeds from the posterior to the anterior margin of the joint.

The abdomen is densely punctate.

The right chelipede is somewhat larger than the left.

The meri reach but little beyond the lateral margins of the cephalothorax, the upper edge is unarmed, but transversely rugose, the two angles of the lower surface are granular and rather sharp, especially the outer. The lower surface bears a small conical tubercle distally near the inner edge and is somewhat granular around it. The outer surface is also somewhat rugose. The carpopodites are slightly rugose above and armed at the inner angle with a strong spine, that, especially in the smaller chelipede, is somewhat flattened and compressed; beneath this spine a much smaller one is seen. The horizontal length of the larger hand measures two thirds the width of the carapace, the fingers are about just as long as the palm and the latter is almost just as high at the articulation as long. The outer surface of the palm is covered with little salient, transverse rugosities; on the upper and on the lower margin flattened granules, not at all prominent, are found, but the granules as well as the rugosities are visible to the naked eye. The pointed fingers cannot be brought into complete contact, but leave a narrow interspace when closed; they resemble those of *Pot. sinuatifrons*, presenting the same longitudinal grooves and rows of puncta; they are for the rest smooth, the dactylus appears only indistinctly granular at the base. The fingers show several teeth, that are small, obtuse and unequal. The other chela agrees with the described one, but the fingers are distinctly somewhat longer than the palm.

The ambulatory legs are also similar to those of *Pot. sinuatifrons*. They are of moderate length, so e. g. are those of the antepenultimate pair one third longer than the carapace is broad. The meropodites are rather slender, so are those of that pair almost 4-times as long as broad, and the following joints are also slender, the propodites of this pair being about 3-times as long as broad. The meropodites carry transverse rugosities on their outer surface near the upper margin, that is quite unarmed at its distal end, those of the last pair are a little punctate, smooth. The two following joints are also rugose externally; the crest on the outer surface of the carpopodites is well-marked except on the legs of the last pair and the propodites present a longitudinal groove in the middle of their outer surface. The last joints are stout, elongate, a little longer than the propodites, well armed with small spines and slightly arcuate towards their extremities.

The cephalothorax has a light violet colour, the legs are yellowish red.

Amongst the type-specimens that I received from the Zoological Museum of Göttingen is also a female, without eggs, of that species that was referred by Bürger (in: Zoolog. Jahrbücher, herausgegeben von J. Spengel, Abth. f. System. V. 8, 1894, p. 2) to *Potamon sinuatifrons*. It belongs certainly to this species for there are no other differences from the type-specimens from the Paris Natural History Museum than with regard to the dactylopodites of the ambulatory legs. According to the measurements these joints indeed appear comparatively a little longer and somewhat narrower than in the Paris types. Bürger referred his specimens with some doubt to *Pot. sinuatifrons*, for he was misled by the figure of this species in the »Nouvelles Archives du Muséum", that is inexact as shows at first sight a comparison with my figures (Plates 8 and 9, Fig. 9). *Potamon sinuatifrons* proves consequently to inhabit the Philippine Islands (Zamboanga and Rio Jibon): the habitat was hitherto remained unknown. It is represented in Central Borneo by *Pot. mahakkamense* and *Pot. consobrinum*.

Measurements in mm.:	1	2	3	4
	♀	♂	♂	♀
Breadth of the cephalothorax	61	53	36	41
Length „ „ „	45	39	26½	30½
Distance between the ext. orbital angles	33½	31½	22½	26½
Breadth of the frontal margin	14	12½	8¾	10
Distance between the epibranchial teeth	44	37¾	27½	31½
Distance between the external orbital angle and the epibranchial tooth	5½	3½	2⅔	3

		1	2	3	4
		♀	♂	♂	♀
Distance, in the middle line, between the frontal margin and the postfrontal ridge		5	4	3	4
Distance between the outer angle of the front and the inner portions of the postfrontal ridge				5	3¾
Distance between the outer angle of the orbits and the ends of the lateral portions of the postfrontal ridge		5½	4½	3¼	3½
Breadth of the mesogastric area		12½	12	9	10
〃 of the posterior margin of the carapace		21	15	11½	15
Breadth of the orbits		9½	9½	7	7⅓
Height 〃 〃 〃, the margins included		5½	5	4¼	4⅔
Length of the larger chela		42½	39	24½	29
〃 〃 〃 palm		22	19½	13½	14½
Height 〃 〃 〃		19⅓	16½	10	12⅓
Length of the legs	of the antepenultimate pair.	85	75	50	58
〃 〃 〃 meropodites		27½	25½	18	18½
Breadth 〃 〃 〃		7½	7	5⅖	5⅖
Length of the propodites		16	14	10	11
Breadth 〃 〃 〃		5¾	5¼	3⅚	3⅚
Length of the dactylopodites		18½	15	10½	13½
Breadth 〃 〃 〃			2	1½	1⅔

N°. 1. *Potamon mahakkamense* n. sp.; N°s 2 and 3 type-specimens of *Pot. sinuatifrons* H. M. E., habitat unknown, from the Paris Natural History Museum; N°. 4 Female of *Pot. sinuatifrons* H. M. E. from the Philippine Islands and belonging to the Göttingen Museum.

Potamon (*Potamon*) *consobrinum*, n. sp.

(Plates 6, 9 and 10, Fig. 10).

Telphusa sinuatifrons Milne Edwards?, Miers, in: Annals and Mag. of Natural History, Ser. 5, Vol. 5, 1880, p. 305.

One male, having lost the chelipedes, collected October 1893 by Dr. Hallier on the top of Mount Damoes, Sambas, at an altitude of 1100—1300 meter.

One somewhat younger female, without eggs, captured June 1894 in the Upper Sibau river.

There can be no doubt that these specimens belong to the same species as that which was described by Miers

(l. c.) under the name of *Telph. sinuatifrons*, but they ought to be considered as a new species, though bearing a close resemblance to the former, three type-specimens of which are lying before me (confer p. 92). *Pot. consobrinum* differs 1° by the still more depressed and flattened cephalothorax, 2° by the different shape of the front, 3° by the more enlarged joints of the ambulatory legs and by the shorter dactylopodites.[1]

The two specimens, collected at localities rather far distant from one another, though certainly belonging to one and the same species, do not fully agree, so that I prefer to treat of them separately. As the female bears a closer resemblance to *Pot. sinuatifrons* than the male does, I will describe it in the first place.

With regard to the proportion of the measurements of the carapace, the female fully agrees with the types of *Pot. sinuatifrons*. The front, however, is very little deflexed, still less than in this species, and it appears a little broader in proportion to its length. The upper margin of the orbits has namely a different direction (Fig. 10^b and Fig. 10^c); its superciliary portion, forming the lateral margin of the front, makes a very obtuse angle with the adjoining middle portion of the margin and this middle portion runs very slightly backwards before curving towards the external orbital angle. In the types of *Pot. sinuatifrons*, however, the lateral margins of the front pass constantly with a regular curve into the middle portion of the margin (Fig. 9 and Fig. 9^b) and this middle portion runs transversely outwards or even slightly forwards; the lateral margins of the front are comparatively longer than in the female from the Upper Sibau and in consequence of it the front of the latter appears slightly broader. When the carapace is looked at from above, the median sinus of the frontal margin appears, in *Pot. sinuatifrons*, a little deeper than the lateral ones (Plate 8, Fig. 9^a); in the female from the river Sibau, however, the free border of the front appears almost straight in the middle, but the lateral sinuses are well-defined (Plate 6, Fig. 10^e). The postfrontal ridge almost fully agrees with that of *Pot. sinuatifrons*, the median or internal portions, however, are cristiform, in the type-specimens of the other species indistinctly so. The oblique grooves between the gastric and the epibranchial region are somewhat deeper than in *Pot. sinuatifrons* and the cardiac area is bounded posteriorly by a transverse depression from the intestinal one. In both species are the epigastric lobes distinctly defined posteriorly by a transverse furrow. The raised line above the legs of the 5th pair is more prominent than in the other species. As regards the course of the lateral margin of the cephalothorax, the form of the extra-orbital tooth and of the epibranchial one, the proportion between the distance of these teeth from one another and that between the external orbital angles, the female from the Upper Sibau agrees with *Pot. sinuatifrons*. The free border of the front and the supraorbital margin are almost smooth, but in *Pot. sinuatifrons* distinctly crenulate.

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[1] Milne Edwards (in: Annales Sciences Nat. 1853, T. XX, p. 211) says that *Th. sinuatifrons* „ressemble au *Th. fluviatilis* par sa forme générale". This, however, can hardly be said. When I compare specimens of the European species from the river Sarno near Naples with the types of *Pot. sinuatifrons*, the carapace of the latter appears more enlarged and more flattened, the extra-orbital tooth has a quite other shape and direction, the antero-lateral margins are more finely denticulate, the front has a different form and is but finely granular and there are still more differences.

Though the type-specimens are varnished, the upper surface of the cephalothorax seems, however, to present the same structure in both species. The anterior branchial region is covered with oblique rugosities that, near the posterolateral margins, gradually pass into less salient, short, raised lines. The extra-orbital tooth is granular above, the front finely granulate. The epigastric lobes and the protogastric regions appear very slightly rugose anteriorly, the rest of the surface is minutely punctate.

The inferior orbital margin is distinctly crenulate in *Pot. sinuatifrons*, but in the female from the Upper Sibau scarcely so. With regard to the rugosities on the subhepatic and subbranchial regions both species nearly resemble one another, they are, however, less prominent. The epistome presents also the .same characters, but the lobe at the anterior extremity of the lateral margins of the buccal frame, that in *Pot. sinuatifrons* is crenulate, appears nearly smooth, just as in *Pot. mahakkamense.* The external maxillipedes fully agree in both species. Sternum and abdomen are smooth, finely punctate.

Though the type-specimens of *Pot. sinuatifrons* are all males, the anterior legs seem to resemble those of the female from the Upper Sibau. The left is a little larger than the right. The angles of the lower surface of the arms are distinctly granulate in *Pot. sinuatifrons*, but almost smooth in the female, the rugosities on the upper edge are also less defined. The upper surface of the wrists carries very small, partly inosculating grooves and depressions, but in the males of *Pot. sinuatifrons* one observes finely granulated raised lines; just as in this species the inner angle is armed with a short conical spine, beneath which is a very small one. The chela of the left leg is just as long as measures the distance between the outer orbital angles, the fingers, in contact throughout their length, are a little longer than the palm, that is somewhat less high at the articulation of the fingers than it is long. The outer surface of the palm is beset with transverse rugosities and inosculating foveae, but in the types of *Pot. sinuatifrons* transverse granulated lines are seen at least on the upper margin and on the upper half of the outer surface and some granules at the base of the index. The fingers are distinctly grooved and multidentate. The ambulatory legs resemble those of *Pot. sinuatifrons*, but the propodites of the 5th pair are slightly broader and the dactylopodites a little shorter and stouter.

The male from Mount Damoes differs from the female by the following. The cephalothorax is a little broader anteriorly, as is proved by the proportion between its length and the distance between the external orbital angles or that between the epibranchial teeth. The extraorbital tooth is comparatively larger. In the female the distance between the external orbital angle and the tip of the epibranchial tooth measures just one eighth part of that between the external orbital angles; in the male from Mount Damoes, however, one sixth, but perhaps may this difference be attributed to the different size of these specimens. In the female the free border of the front measures exactly one third the length of the carapace, just as in the type-specimens of *Pot. sinuatifrons;* in the male from Mount Damoes it is, however, considerably broader and such a specimen was described by Miers (l. c.). The front, the frontal margin, the orbits and their margins fully resemble, however, those of the female; the free border of the front (Plate 6, Fig. 10^d and Plate 9, Fig. 10^b) presents three very shallow bays, the middle of which is not deeper than the lateral.

The postfrontal ridge is a little less salient, but for the rest agrees with that of the female. The grooves between the gastric region and the epibranchial are not so deep. The median process of the posterior border of the epistome has a different form in the male and in the female (Fig. 10^f and Fig. 10^g), but this is also the case in the two specimens of *Pot. sinuatifrons*, in the larger one it is triangular about as in the female from the Upper Sibau, but in the smaller specimen its form agrees very well with that observed in the male from Mount Damoes. This difference therefore cannot be a sexual one. The posterior margin of the epistome is transverse in *Pot. sinuatifrons*, but both in the male and in the female of *Pot. consobrinum* it runs on each side slightly backwards.

The lower surface of the carapace and the outer footjaws fully agree in both individuals.

The abdomen (Fig. 10^i) resembles that of *Pot. sinuatifrons*. The terminal segment is a little shorter than its base is broad, the lateral margins are slightly convex, the tip is obtuse. The penultimate segment is a little shorter, its posterior margin is somewhat more, the anterior a little less than once and a half as broad as this segment is long and the lateral margins are nearly straight.

The anterior legs are unfortunately lost. The joints of the ambulatory legs are slightly broader in proportion to their length than in the female from the Upper Sibau, the dactylopodites, however, even those of the 5th pair, fully agree.

Both specimens have the same colour. The upper surface of the cephalothorax and of the ambulatory legs is olive-green, the free border of the front, the orbital and the antero-lateral margins are yellow, the lower surface presents the same colour though lighter; the anterior legs of the female are reddish with a greenish hue and the extremities of the fingers are dark brown.

I suppose that the described differences will prove to be individual or sexual or a consequence of different age, when a large series of specimens from the same localities once will be examined.

Measurements of the two specimens of *Pot. consobrinum*:

	♂	♀
Breadth of the cephalothorax	45	39
Length 〃 〃 〃	33	29
Distance between the external orbital angles	30	24
Breadth of the frontal margin	14	9⅔
Distance between the epibranchial teeth	38	30
Distance between the ext. orbital angle and the epibranchial tooth.	5	3
Distance, in the median line, between the frontal margin and the postfrontal ridge.	3½	3
Distance between the outer angle of the front and the internal portions of the postfrontal ridge	4½	3⅓
Distance between the outer angle of the orbits and the postfrontal ridge	4½	3½
Breadth of the mesogastric area	12	10½
Breadth of the posterior margin of the carapace.	13^1	13
Breadth of the orbits	8	7
Height 〃 〃 〃	4¾	4
Length of the terminal segment of the abdomen	7½	
〃 〃 〃 penultimate 〃 〃 〃 〃	6½	
Breadth of the anterior margin of this segment	9	

	♂	♀
Breadth of the posterior margin of this segment	10⅘	
Length of the larger chela		24
〃 〃 〃 palm		10
Height 〃 〃 〃		9
Length of the legs of the antepenultimate pair	60	58
〃 〃 〃 meropodites	21	19
Breadth 〃 〃 〃	6⅘	5½
Length of the propodites	11	11¼
Breadth 〃 〃 〃	5	4
Length of the dactylopodites	13½	12
Length of the legs of the penultimate pair	62	55
〃 〃 〃 meropodites	19½	18
Breadth 〃 〃 〃	6¾	5½
Length of the propodites	11	11
Breadth of the propodites	5	4
Length of the dactylopodites	13	11¼
Length of the legs of the last pair	50	43
Length of the meropodites	16	14
Breadth 〃 〃 〃	6½	5¼
Length of the propodites	9½	8½
Breadth 〃 〃 〃	6	4¾
Length of the dactylopodites	9¼	8

Potamon (*Potamon*) *Melanippe*, n. sp.

(Plate 9, Fig. 11).

Two males and two females were collected on the Liang Koeboeng Mountains, March and April 1894.

The largest specimen is a female without eggs, the other female somewhat younger and the abdomen of which is still triangular, was found in the forest. The larger male has about the same size as the younger female, the other male is quite young. Perhaps, however, even the largest specimen has not yet attained its full size. This remarkable species has the same enormously long and slender ambulatory legs as *Pot. austenianum* W.-Mas. from Cherra Púnjí, Assam, but it appears to be a different species. As was rightly remarked by Wood-Mason (l. c. p. 204), *Pot. austenianum* differs from all its known congeners at first sight by the extraordinarily long and slender ambulatory legs and I will therefore firstly indicate the differences between the Indian species and that from Central Borneo.

Pot. austenianum W.-Mas. was described after a single adult female, the carapace of which is 48 mm. broad; the cephalothorax of the largest specimen from Central Borneo is not yet half as broad, but, as was already remarked, our specimens are perhaps not yet fully developed. The two females show an epibranchial tooth, obtuse and small, but the males present only a trace of it; the epibranchial teeth of *Pot. austenianum*, however, are described as »extremely salient". The epibranchial teeth pass backwards as crests that in the species from Assam are prominent and dentate, in the Borneo specimens, however, only finely denticulate or granulate. The epibranchial teeth are situated comparatively more backwards, farther distant from the external orbital angles than in the Indian species so that the extraorbital tooth appears larger and the postfrontal ridge placed more backwards. The post-frontal ridge runs as in *Pot. austenianum*; the epigastric lobes that are finely granulate and confluent with the protogastric regions, are somewhat advanced, the mesogastric furrow between them is deep, but not continued untill the cervical groove. The epigastric lobes are somewhat oblique and separated by shallow furrows from the contiguous portions of the postfrontal ridge. These external portions are granular but do not reach until the epibranchial teeth. The mesogastric area is bounded in the Indian species by distinct furrows from the rest of the gastric region; these furrows are wanting completely in *Pot. Melanippe.* The external portions of the supraorbital margins are more oblique, as may be seen by comparing my figures with those of Wood-Mason, and the orbits are little broader than high, those of *Pot. austenianum* appear to be only half as high as broad (Wood-Mason, l. c. fig. 2). The posterior margin of the cephalothorax is considerably broader: in the species described by Wood-Mason, an adult female, the breadth of the posterior margin is not yet half as large as the distance between the external orbital angles, but in *Pot. Melanippe* it measures about three fourth parts of the latter. The merus-joint of the outer foot-jaws has a different form, the external margin being convex; the ischial line is situated a little closer to the internal margin of the ischium.

These are the principal differences, I will add still the following. The front has apparently the same shape in both species. The mesogastric furrow is continued on the front, that is strongly deflexed and its rather coarsely punctate upper surface is raised on each side into a slightly convex eminence and the superciliary portions of the upper orbital margins are also longitudinally convex. As the lateral margins of the front converge rather much towards the anterior margin, the front is much wider at the base than at the free border. The latter is slightly bayed in the middle and convex on each side; it forms obtuse rounded angles with the lateral margins. One observes, parallel with the anterior margin of the front and close to it, a very finely crenulate crest or ridge; this crest appears (Figs. 11^a and 11^b) also concave in the middle, but does not reach to the lateral margins of the front, the lateral extremities being separated from them by narrow fissures. The outer orbital angles are very salient, acute, and project a little beyond the anterior border of the front (Fig. 11^a); the outer margin of the extra-orbital tooth has a S-like form, its upper surface is somewhat concave and granular.

The antero-lateral portions of the branchial region are marked with coarse granulations and the postero-lateral margins show finely granulate, oblique wrinkles. Oblique deep grooves separate the anterior branchial lobe from the protogastric region, but these furrows are not continuous to the semicircular groove, with other words the cervical groove is interrupted. The protogastric regions are also finely granular, the granules gradually decrease in size backwards and change into impressed puncta on which microscopical hairs are inserted, so that the metabranchial, cardiac and intestinal areae appear densely punctate. The posterior margin of the carapace is slightly concave.

The finely crenulate lower margin of the orbits shows no hiatus or incision near the external orbital angle, is regularly arcuate and the inner angle is obtuse. The posterior margin of the epistome (Fig. 11^b) is smooth and the triangular, rather obtuse tooth in the middle is separated by narrow fissures from the lateral parts that run like a S.

The branchial floor is covered with oblique wrinkles, the subhepatic region is also somewhat rugose and parallel rugae are seen on the branchiostegite near the boundary of the subhepatic area. The merus-joint of the outer footjaws (Fig. 11^c) is quadrate, its anterior margin is straight or a little concave, the outer margin convex; the ischial line runs near the internal margin of the ischium, somewhat obliquely and does not reach the anterior margin.

The male abdomen (Fig. 11^d) bears some resemblance to that of *Pot. borneense* v. Marts. var. *hilaris*. The terminal joint is once and a half as long as broad at the base, has a rounded extremity and its margins are slightly concave posteriorly. The penultimate joint is a little shorter, quadrate, as long as broad anteriorly and its posterior margin is a little less broad than the anterior. Sternum and abdomen are densely punctate. The abdomen of the largest female resembles that of *Pot. stoliczkanum* (Wood-Mason, l. c. pl. XII, fig. 10), but the terminal joint is triangular, its length being in proportion to its breadth at the base like 4 : 7.

Like those of *Pot. austenianum*, the chelipedes are unequal, either the right or the left being the larger; they seem to agree in both species. The upper margin of the meri carries transverse or oblique wrinkles and is unarmed at the distal end; the margins of the lower surface that bears no tubercle near the articulation of the wrist, are a little tuberculate. The wrists are granularly rugose above and armed with a short, somewhat flattened spine at the inner angle, below which there is no other. The horizontal length of the larger chela is equal to the length of the cephalothorax and this hand is slightly more than twice as long as high; the fingers are a little shorter than the palm and are, both in the male and in the female, in contact throughout their length. The palm is densely covered with fine granules, that are partly arranged in transverse rows. The fingers are very finely granular, they are marked with longitudinal rows of puncta; the dactylus is not grooved, but a longitudinal groove is observed on the outer surface of the index, that, however, is rather shallow.

The ambulatory legs resemble those of *Pot. austenianum*, so are e. g. those of the penultimate pair 3-times as long as the carapace and the meropodites of this pair are just as long as the cephalothorax. The meropodites and the propodites of the penultimate pair are 5-times as long as broad and the terminal joints are almost as long as the propodites. The meropodites are unarmed at the distal end of their upper margin, that is transversely wrinkled or somewhat granular; their outer surface is densely punctate, though smooth. The ambulatory legs are glabrous.

The cephalothorax of the three large specimens has a dark bluish-black colour above, below on the sternum and the abdomen it is yellowish; the chelipedes are dark olive green, the fingers have yellow tips and are marked in the middle with one or two narrow yellow stripes. The ambulatory legs are black with yellow tips. The young individual is reddish brown coloured.

Measurements in mm.:

	♂	♀	♀
Greatest width of the cephalothorax	19	21½	17
Length 〃 〃 〃	14	16	12½
Distance between the external orbital angles	11	12¼	10
〃 〃 the epibranchial teeth	15	17¼	13¼
Breadth of the anterior margin of the front	4¼	4¾	3¾
Breadth of the posterior border of the carapace	8¼	10¼	8

	♂	♀	♀
Length of the terminal joint of the abdomen	3		
〃 〃 〃 penultimate segment	2½		
Breadth of the anterior margin of this segment	2¼		
〃 〃 〃 posterior 〃 〃 〃 〃	2⅓		
Breadth of the orbits	3¼	3½	2⅘
Height of 〃 〃	2	2⅗	2
Horizontal length of the larger hand	14	17½	12
〃 〃 〃 〃 fingers	6½	8	5¼
Height of the larger hand	6	7½	5¼
Length of the legs of the penultimate pair	45		
〃 〃 〃 meropodites of this pair	15	16	12½
Breadth 〃 〃 〃 〃 〃 〃	3	3	2½
Length of the propodites 〃 〃 〃	10	11	8
Breadth 〃 〃 〃 〃 〃 〃	2	2⅕	1¾
Length of the dactylopodites 〃 〃 〃	10	11	8½

Potamon (*Geothelphusa*) *kenepai*, n. sp.

(Plates 10 and 11, Fig. 12).

One single male collected, January 1894, in a forest on Mount Kenepai.

Though this specimen bears a close resemblance to *Pot. hendersonianum* n. sp., it is to be considered, I think, as a different species.

The cephalothorax is subquadrate, little broader than long, the greatest width being in proportion to the length about as 5 : 4 and the distance between the outer angles of the orbits being but little shorter than the length of the cephalothorax. The branchial region, moreover, is somewhat expanded laterally, so that above the legs of the antepenultimate pair the cephalothorax appears almost just as broad as at it greatest width. The carapace is moderately convex anteriorly, depressed posteriorly and the interregional furrows are rather deep. The deep cervical groove is interrupted, as in so many other species; the anterior portions directed towards the epibranchial teeth, would make a right angle with one another when prolonged backwards. Rather deep depressions separate the cardiac region from the intestinal one and shallow depressions are observed between the somewhat convex, anterior branchial lobe and the much smaller posterior. The slightly concave posterior margin of the cephalothorax is just half as broad as the latter.

The post-frontal ridge is only represented by the prominent epigastric lobes, that are wrinkled, advanced, confluent with the protogastric regions, but subsiding abruptly towards the front; the mesogastric furrow is deep and extends almost to the middle of the gastric region, but the mesogastric area is, however, confluent backwards with the protogastric lobes. The postorbital groove is shallow. The front fully agrees with that of *Pot. hendersonianum*, but it is slightly narrower and the lateral margins are somewhat less oblique. The upper surface of the front is a little more concave in the middle and the postorbital groove is smooth.

The nearly transverse upper margin of the orbits (Fig. 12^a) is slightly sinuous and the acute external orbital angles reach not as far forward as the front. At a short distance behind the outer angle of the orbits one observes a rudimentary epibranchial tooth, represented only by a slight notch in the margin and the small prominence passes backward and inward, for a very short distance, as an obscure crest, that is just as long as the distance between the extra-orbital angle and the epibranchial tooth. A little more backward, the cephalothorax appears very slightly swollen outside of and beneath the antero-lateral margin and, posterior to the antero-lateral crest, the whole margin of the cephalothorax is marked with oblique raised lines. To the naked eye the upper surface of the cephalothorax appears smooth and shining, but, examined under an ordinary lens, a fine and close punctation is observed on the whole surface; the puncta are of different size, larger puncta being distributed amongst numerous microscopical other ones. Strangely enough the right half of the cardiac region is quite smooth, devoid of puncta. The margins of the front and of the orbits are smooth.

The orbits and the eye-peduncles fully agree with those of *Pot. hendersonianum* and this is also the case with the lower surface of the carapace. The median process of the posterior margin of the epistome, however, is not prominent and broadly rounded.

The ischial line on the somewhat punctate, outer maxillipedes (Fig. 12^d) is a little oblique and runs somewhat closer to the internal than to the external margin of the ischium-joint; it reaches not to the anterior margin. The merus-joint is somewhat broader than long, the slightly arcuate outer margin makes a right though rounded angle with the straight anterior one.

The abdomen resembles that of *Pot. hendersonianum*, so that I refer to the figure of that species and to the measurements. The distance between the extremity of the abdominal cavity and the posterior margin of the buccal frame (Fig. 12^c) is distinctly shorter than that between the extremity of the ischial line on the outer footjaws and the outer margin of the ischium. Sternum and abdomen are finely punctate.

As well the anterior as the ambulatory legs resemble almost completely those of *Pot. hendersonianum*, but the fingers of the larger hand (Fig. 12^e) show a very fine granulation, when examined under a lens. For the rest I refer to my figure and to the measurements. The upper surface of the cephalothorax has a reddish-brown colour, that is somewhat lighter on the ambulatory legs; the chelae are yellowish, but the distal half of the fingers is brown.

Measurements in millim.:

Greatest breadth of the cephalothorax	$13\frac{3}{4}$
Length 〃 〃 〃	$11\frac{1}{2}$
Distance between the outer angles of the orbits	$10\frac{3}{5}$
〃 〃 〃 epibranchial teeth	12
〃 〃 〃 outer angle of the orbits and the epibranchial tooth	1
Breadth of the free border of the front	$4\frac{3}{5}$
〃 〃 〃 posterior margin of the cephalothorax	$6\frac{3}{4}$

Width of the orbits	3
Height „ „	2
Distance, in the median line, between the frontal margin and the epigastric lobes	1½
Length of the terminal segment of the abdomen	2½
„ „ „ penultimate segment	2½
Breadth of the anterior margin of this segment	2
„ „ „ posterior „ „ „ „	2¼
Length of the antepenultimate segment	1⅗
Breadth of the posterior margin of this segment	3⅖
Horizontal length of the larger hand	10½
„ „ „ „ fingers	5¾
Height of the palm	5
Horizontal length of the smaller chela	7½
„ „ „ „ fingers	4¼
Height of the palm	2⅘
Length of the legs of the penultimate pair	25
„ „ „ meropodites of this pair	7¾
Breadth „ „ „ „ „ „	2⅖
Length of the propodites of this pair	4½
Breadth „ „ „ „ „ „	1⅗
Length of the dactylopodites of this pair	5¾
Breadth „ „ „ „ „ „	⅘

Potamon (*Geothelphusa*) *hendersonianum*, n. sp.

(Plate 11, Fig. 13).

Two males and four females, one of which is ova-bearing, were collected, October 1893, by Dr. Hallier at the top of Mount Damoes, Sambas, at an altitude of 1100—1800 meter.

One very young male, collected by Dr. Nieuwenhuis, 1893, at the foot of Mount Damoes.

This species, that I have the pleasure to dedicate to Prof. J. R. Henderson of Madras, belongs to the subgenus *Geothelphusa*, because the post-frontal ridge is only represented by the more or less distinct, epigastric lobes and it differs from allied species by the epibranchial teeth wanting completely.

The cephalothorax is little enlarged, the greatest width being in proportion to the length as 4 : 3. The gastric region is somewhat convex from before backwards (Fig. 13^b) and also from side to side; the anterior branchial lobe is slightly swollen and scarcely distinct from the posterior. The cardiac and intestinal regions finally are flattened. The cervical groove is interrupted; the two anterior shallow depressions between each protogastric region and the anterior branchial grooves that reach till near the lateral margin of the cephalothorax, would, when prolonged backwards, make an angle with one another slightly larger than a right one, their direction being very oblique; the median portion of the cervical groove is also shallow. An anterior and a posterior pair of puncta, adjoining the cervical groove on the gastric region, are quite distinct. The mesogastric furrow is moderately deep, slightly continued on to the front but not backwards, so that the gastric region is not subdivided. The epigastric lobes that are little prominent and confluent backwards with the protogastric regions, are two small areolets covered with oblique wrinkles and directed somewhat obliquely, but sometimes they are scarcely defined; they are together a little less broad than the front. On each side of the epigastric lobes the anterior boundary of the protogastric regions appears more or less distinctly wrinkled. The flattened cardiac region, somewhat broader than long, is bounded posteriorly by a shallow transverse depression from the intestinal area that is likewise much broader than long and covered with very fine transverse wrinkles, but the cardiac area is confluent, on each side, with the posterior branchial one. The urogastric lobules are small, rugose and not contiguous to one another.

The front is strongly deflexed downward and raised into two very slightly convex eminences, that are defined laterally from the upper margin of the orbits by a well-marked furrow, which curves laterally towards and issues into the quite shallow post-orbital groove or depression between the orbits and the protogastric regions. The upper surface of the front, consequently slightly concave in the middle, appears very finely wrinkled and granular, when examined under a lens and by means of the latter a still finer granulation is observed on the post-orbital groove. The free border of the front, which, just like the upper margin of the orbits, is smooth, is divided by a moderately deep and broad median sinus into two distinctly arcuate lobes, that pass with a regular curve into the lateral margins of the front i. e. into the upper margins of the orbits, so that it is somewhat difficult to measure exactly the breadth of the free border. It appears, however, to measure about one third the width of the cephalothorax. The lateral margins of the front diverge moderately backward, so that the front is much broader at its base than at its free border; measured in the middle, the height of the front i. e. the distance between the epigastric lobes and the anterior margin, appears to be one third the breadth of the latter. A distinct transverse crest runs immediately behind and contiguous to the free border of the front, though this crest extends not along the whole breadth of the margin (Fig. 13^b).

The moderately sharp outer angles of the orbits reach a little less forward than the front; the distance between them is about as large as the cephalothorax is long. The lateral margins of the cephalothorax are S-like arcuate, so that the carapace is narrowest at the level of the posterior boundary of the gastric region and the postero-lateral margins are somewhat concave (Fig. 13). One observes almost along the whole extent of the lateral margins numerous, partly interrupted, oblique raised lines; they are rather long, reaching nearly to the middle of the branchial regions. The foremost of these lines that bounds anteriorly the oblique anterior portion of the cervical groove, runs obliquely towards the lateral margin of the cephalothorax and other interrupted lines border that groove posteriorly; between the outer angles of the orbits and these foremost oblique lines the lateral margin of the cephalothorax is slightly carinate, but for the rest the margin is rounded. An epibranchial tooth, even an epibranchial notch, that e. g. is observed in *Geothelphusa Kuhli* de M., are wanting completely. The gastric, cardiac and branchial regions are densely punctate, for the rest smooth; the puncta are somewhat larger on the protogastric lobes than posteriorly. The slightly concave posterior margin of the cephalothorax is, in the male, about once and a half as broad as the free border of the front, in the female somewhat broader.

The orbits are transverse, their width measures two thirds of the free border of the front and they are once and a half as broad as high (Fig. 13^b). The lower margin that is finely crenulate, is slightly arcuate, without a notch near the outer angle and the obtuse inner angle is not prominent. The eye-peduncles are finely granular.

The oblique raised lines of the lateral margin of the cephalothorax pass forwards on to the inflected portion of the carapace, i. e. to the branchial floor; a smooth interspace, though no furrow, separates it from the subhepatic region, which is likewise beset with several raised lines, running, however, more transversely. The groove between the subhepatic region and the branchiostegite is deep and the latter is also covered with transverse and oblique, prominent, raised rugosities. The median process of the posterior border of the epistome is prominent, obtuse.

The well-marked ischial line on the slightly punctate outer foot-jaws runs much nearer to the inner than to the outer margin and is not continued to the anterior margin of the ischium-joint; the merus-joint is a little broader than long, the curved outer margin makes an obtuse angle with the shorter, very slightly concave anterior margin (Fig. 13^c).

The sternum of the male is smooth, finely punctate. The distance between the anterior extremity of the abdominal cavity and the posterior oblique margin of the buccal frame (Fig. 13^e) is a little broader than the distance between the anterior extremity of the ischial line on the outer foot-jaws and the external margin of the ischium.

The male abdomen (Fig. 13^{d}) much resembles that of *Geothelphusa Kuhli.* The terminal joint, the lateral margins of which are slightly concave posteriorly, is a little longer than its base is broad; the penultimate segment is just as long or scarcely longer than the terminal and appears almost just as broad as long. The antepenultimate segment is a little shorter than the penultimate and just half as long as its posterior margin is broad, the lateral margins of this segment are very slightly concave.

The terminal segment of the abdomen of the female is triangular, half as long as its posterior margin is broad, with obtuse extremity.

The eggs (Fig. 13^{g}) are few in number, but large, their diameter measuring about 1,75 millim.

In both males the left chelipede is the larger one. The meri are short, projecting but little beyond the lateral margins of the carapace, the dorsal edge without a tooth at the extremity is transversely rugose and the outer surface is covered with finely crenulate transverse rugosities, the two inferior margins are granular, the lower surface is smooth, without a tubercle near the carpal articulation. The wrist is covered with transverse rugosities and bears at the inner angle a short tooth. The larger chela of the adult male (Fig. 13^{f}) is, measured horizontally, as long as the cephalothorax is broad; the fingers that leave an interspace between them when closed, are slightly longer than the palm and the latter is about as high as long. The inferior margin of the hand is slightly concave below the articulation of the fingers. The somewhat convex outer surface of the palm is smooth and shining, one observes only, by means of a lens, a few finely crenulate, transverse lines near the carpal joint. The fingers are regularly tapering; both are smooth, not grooved but marked with fine puncta, arranged in longitudinal rows, scarcely visible to the naked eye. The index is straight and bears several small teeth, that decrease in size towards the tip, and one of which, on the middle of the finger, is the largest; the teeth of the dactylus are less prominent and this finger is strongly curved; the extremities of both fingers are pointed.

The smaller chela of the adult male measures only two thirds the length of the other; the fingers that are almost in contact, are just as long as the palm and the latter is a little less high than long. The transverse finely crenulate lines near the carpal joint extend almost to the middle of the palm and the longitudinal rows of puncta are faintly grooved.

In the second male the larger hand measures only two thirds the width of the cephalothorax, the fingers that are just as long as the palm, are in contact with one another and the dactylus is not yet arcuate; they are not grooved, but marked with longitudinal rows of puncta. The fingers of the smaller chela are slightly grooved.

In the female the anterior legs are equal or subequal.

In the ova-bearing specimen the left chela is very slightly larger than the right. The fingers are in contact, feebly toothed and more or less distinctly longitudinally grooved.

The ambulatory legs are of moderate length (Fig. 13). So are e. g. those of the penultimate pair almost twice as long as the cephalothorax is broad; the meropodites that bear no tooth at the distal end, are 3-times and the propodites a little more than twice as long as broad; the terminal joints finally are a little longer than the propodites. The compressed dactylopodites are straight, only slightly arcuate at the horny tips and stout; their edges are armed each with 6 or 7 spinules. The meropodites are marked on their outer surface with transverse rugosities, except those of the last pair that are only finely punctate. Six or seven spinules are observed along the posterior margin of the propodites. These legs carry on their margins, especially of the three terminal joints, extremely short, setose hairs.

The specimen from Mount Kenepai, that I described above as a new species, *Potamon kenepai*, is closely allied, but seems to belong to a different species. The cephalothorax, indeed, is slightly longer in proportion to its breadth, less expanded laterally at the level of the anterior branchial region and less narrowed posteriorly. There exists a rudimentary epibranchial tooth. The epigastric lobes are more prominent and the front is a little less broad. The median lobe of the posterior margin of the epistome is less prominent, broadly rounded. The distance, finally, between the anterior extremity of the abdominal cavity of the male and the posterior margin of the buccal frame is distinctly shorter than the distance between the anterior extremity of the ischial line on the outer foot-jaws and the external margin of the ischium. The fingers of the larger chela appear very finely granular under a lens, in *Pot. hendersonianum*. however, this minute granulation is scarcely perceptible.

Potamon (*Geothelphusa*) *montanum* Bürger, from the island of Luzon, a male type-specimen from the Göttingen Museum is lying before me, is a different species. The cephalothorax is not enlarged posteriorly, so that the posterolateral margins are not concave, as is the case in the Borneo-species. The oblique wrinkles on the lateral margins are shorter, less distinct and the oblique, lateral portions of the cervical groove are almost completely wanting. The extra-orbital angle is less prominent. The free border of the front has a different shape and the posterior margin of the epistome is much deeper notched on each side of the median process. The orbits are higher in proportion to their breadth, and have a different form; the male abdomen has also another form, sternum and abdomen are much more coarsely punctate. The ambulatory legs finally are more slender than those of *Pot. hendersonianum*.

Bürger is quite wrong when he describes the cephalothorax as being not punctate: the punctulations, on the contrary, are quite distinct.

Potamon (*Geothelphusa*) *Kuhli* de Man, from Java, is still more closely allied. Two adult males and two young females from Tjibodas, described in my paper on the Crustacea collected by Prof. Max Weber in the Indian Archipelago, are lying before me. In the Java-species one observes, a little behind the outer angle of the orbits, a distinct epibranchial notch and the distance between the outer angles of the orbits is a little shorter in proportion to the width of the carapace, so that the latter appears less broad anteriorly than in *Pot. hendersonianum*. The lateral margins of the front that is more profoundly emarginate, are a little more oblique and the external portions of the supra-orbital margin that runs transversely outward in *Pot. hendersonianum* are directed somewhat obliquely forward in the Java-species; in the latter the outer angle of the orbits is much less prominent. In a front view of the cephalothorax the gastric region appears transversely a little more convex in the Borneo- than in the Java-species; the front appears in that view higher in *Pot. hendersonianum* and the two halves of the free border are arcuate in the Borneo species, but almost straight in *Kuhli* (vide de Man, in: Max Weber, Zoologische Ergebnisse einer Reise nach Niederländisch Ost-Indien, T. II, 1892, Pl. XV, fig. 3*a*).

The interspace between the inner angle of the inferior orbital margin and the front is broader in the Java species than in the other. The merus-joint of the outer foot-jaws has a somewhat different form and in *Pot. Kuhli* the ischial line reaches to the anterior margin of the ischium. The male abdomen presents not exactly the same form. The dactylus of the larger chela of the male is more strongly arcuate in *Pot. hendersonianum*; the ambulatory legs have about the same shape in both species, but the dactylopodites are different. In *Pot. Kuhli* they are narrower, more slender and bear in this species a smaller number of spines on their posterior margin, so e. g. on the penultimate pair only three, but five in the other species.

Measurements in millim.:

	♂	♂	♂	♀	♀
Greatest width of the cephalothorax	17¼	12	6¾	14	11½
Length „ „ „	13¼	9¼	5½	11	9¼
Distance between the external orbital angles . .	12½	9½	5¾	10¾	9½
Breadth of the free border of the front . . .	5½	4½	2½	4½	3¾
Distance, in the median line, between the free border of the front and the epigastric lobes .	1¾	1½	⅚	1½	1⅓
Breadth of the posterior margin of the carapace.	8½	6¼	3⅘	7½	6½
Length of the terminal segment of the abdomen.	2¾	1⅘	1⅕		
„ „ „ penultimate segment	2¾	2	1¼		
Breadth of the anterior margin of this segment.	2⅖	1¾	1⅙		
„ „ „ posterior „ „ „ „	2⅗	1⅝	1¼		
Length of the antepenultimate segment. . . .	2	1⅖	⅘		
Breadth of the posterior margin of this segment.	4⅓	3⅕	1¾		
Horizontal length of the larger chela	16½	8	3½	7¾	6½
„ „ „ „ fingers	9	4	1¾	4¼	3⅓
Height of the palm	8¼	4	1⅖	3	2⅔
Horizontal length of the smaller chela	11½	7⅖	3⅖	7¼	6½
„ „ „ „ fingers	5¾	3¾	1⅚	4	3½
Height of the palm	4⅖	2⅘	1¼	2¾	2½
Length of the legs of the penultimate pair . .	31	22½	13	24	22
„ „ „ meropodites	9½	7½	4¼	7¼	7
Breadth „ „	3	2½	1½	2⅖	2⅖
Length of the propodites.	5¾	4¼	2¼	4½	4⅖
Breadth „ „ „	2⅕	1⅔	1	1¾	1⅔
Length of the dactylopodites	7	5¼	3	6	5

Potamon (*Geothelphusa*) *Bürgeri*, n. sp.

(Plates 11 and 12, Fig. 14).

One single male, captured on Mount Liang Koeboeng.

This species that I have the pleasure to name after Prof. O. Bürger of Göttingen, author of a paper on Thelphusidae, has a rather thick cephalothorax, for it is a little thicker than half the greatest width. The cephalothorax is almost quadrate, little enlarged, the greatest width, anteriorly, being only one and one fourth times as broad as the cephalothorax is long. The upper surface appears, in a lateral view, strongly convex from before backwards, very slightly also from side to side. The semicircular groove, bounding the gastric region posteriorly, is shallow, but the oblique lateral portions of the cervical groove are wanting completely. The branchial regions that are undivided, are separated by a shallow transverse groove from the intestinal area, but the cardiac region that is very slightly convex transversely, is confluent both with the adjoining intestinal and branchial regions. The two urogastric areolets are distinct, they are not contiguous and slightly wrinkled. The mesogastric furrow dividing the two little prominent epigastric lobes, is narrow and continued neither on the front nor backwards, so that the gastric region is undivided and, as has already been observed, this region is also confluent with the branchial lobes. The two epigastric lobes are wrinkled above, slightly declivous towards the front, but confluent with the gastric region as well backwards as laterally. The gastric region as well as the branchial one slightly slope downwards towards the orbits, but, except the epibranchial lobes there is no trace of a postfrontal ridge.

The scarcely salient outer angles of the orbits, that project somewhat less forward than the front, are almost as far distant from one another as the cephalothorax is long, the distance between them being but very slightly shorter than the length of the cephalothorax. In a front-view of the cephalothorax (Fig. 14^b), the orbits show a very slight oblique direction; they are just as broad as the free border of the front and once and a half as broad as high. They have an oval outline, the finely crenulate lower margin is entire, without a notch near the outer angle and the inner angle is triangular, not at all prominent. The front is very narrow, the free border measuring exactly one third the distance between the extraorbital angles, and the front is about half as high as the free border is broad. When the carapace is looked at from above, the free border appears divided by a median triangular emargination into two arcuate lobes (Fig. 14^a), but in a front-view (Fig. 14^b) the frontal margin appears almost straight. The front is slightly inflected inward in the middle, and the small inflected portion is bounded above by an angular crest (Fig. 14^b). The outer angles of the front are rounded, they are almost right, so that the lateral margins of the front are nearly parallel, very little convergent.

The lateral margins of the cephalothorax are S-like curved (Fig. 14). They at first diverge somewhat outward, ascending upwards, so that the cephalothorax appears broadest anteriorly, along a line dividing the anterior fourth part from the second. This foremost portion of the lateral margin is surmounted by a finely crenulate raised line or ridge and it appears slightly angular at a distance of one millimeter from the extraorbital angle, but there is no trace of an epibranchial tooth. The lateral margins then curve inward and at last again outwards, so that at their posterior extremity, above the legs of the penultimate pair, the cephalothorax presents its greatest width (Fig. 14), being here even a little broader than anteriorly. The postero-lateral margins are rounded and marked with oblique raised lines that are continued on the lower surface of the cephalothorax; these lines are altogether wanting, however, just above the bases of the ambulatory legs. A few short, oblique, finely crenulate raised lines are also seen on the anterior branchial lobe. The upper surface of the cephalothorax is smooth and shining; examined under an ordinary lens it appears finely punctate, the puncta are more crowded on the posterior branchial and intestinal regions than elsewhere. The front, that is very slightly concave in the middle, appears somewhat uneven near the lateral margins.

A faint groove separates the branchial floor from the subhepatic region on which one observes a few small rugosities, and rather prominent oblique rugae are found on the branchiostegite. The epistome is smooth, the median tooth is narrow, prominent and obtuse (Fig. 14^b). The outer foot-jaws (Fig. 14^c) are a little punctate, the puncta on the ischium-joint are somewhat larger than those on the merus-joint. The ischial line on the outer foot-jaws runs near the internal margin and is prolonged till near the anterior border of this joint; the merus-joint is quadrate, the slightly arcuate outer margin makes an obtuse angle with the much shorter anterior one.

The abdomen (Figs. 14^d and 14^e) resembles that of *Potamon borneense*, var. *hilaris*, being quite narrow and with concave lateral margins. The distance between the anterior extremity of the abdominal cavity and the oblique posterior margins of the buccal frame is a little larger than that between the anterior extremity of the ischial line on the outer foot-jaws and its external margin (Fig. 14^c). As regards the shape of the abdomen, I refer to the figure and to the measurements. Sternum and abdomen are smooth with rare punctulations.

The right chelipede (Fig. 14^f) is much larger than the left. The arm is short, its upper margin without a tooth at the distal end and with short transverse rugosities on its outer surface; the lower surface is smooth, without a tubercle near the carpal articulation and with rather sharp margins that are beset with acute granules. The carpus is covered with small rugosities and its inner margin shows a row of small acute tubercles; there is a short, acute, slightly compressed spine at the inner angle. The larger chela is stout, almost as long as the cephalothorax is broad and the fingers, in contact throughout their length, are just as long as the palm. The palm is very slightly higher than long, a few very small granules, that are not at all prominent, are scattered on the rounded upper margin of the palm, a few also on the very convex outer surface near the carpal articulation and on the rounded lower margin, but the greater part of the outer surface is quite smooth, even not punctate. The fingers are together less high than the palm, so that the lower margin of the index is not placed in the same horizontal line as the arcuate lower margin of the palm. The outer surface of the somewhat compressed immobile finger is very slightly convex, but flattened at the base and covered with small, acute, little prominent granules, that are more crowded on the lower margin than on the outer surface. The dactylus is also covered with similar granules, especially above, and under a lens rows of very fine puncta are moreover observed, but the fingers are not grooved. Both fingers carry some small teeth, two of which on the index are somewhat larger than the others. The inner surface of the hand is almost smooth.

The smaller chela measures only two thirds the width of the cephalothorax, the palm is a little less high than long, and the fingers that are slightly longer than the palm, are distinctly grooved longitudinally, each groove presenting a row of puncta. The fingers are more slender than those of the other hand and more feebly toothed.

The ambulatory legs are long and slender, so are e. g. those of the penultimate pair three times as long as the cephalothorax. The meropodites of this pair, just as long as the latter, are three times as long as broad; the propodites of this pair, half as long as the cephalothorax, are $2^1/_2$-times as long as broad in the middle and the dactylopodites are a little longer than the propodites.

The dactylopodites are slender, straight and quite narrow, tapering but very slightly towards the extremities, so are e. g. those of the penultimate pair about 9-times as long as broad at the base; they are armed with several small spinules along their edges. The posterior margin of the propodites, that are covered with small depressed granules arranged partly in a longitudinal row, carries also 6 or 7 spinules, the anterior margin of the meropodites is quite unarmed, without a tooth at the distal end and their outer surface is covered with a few small rugosities, except those of the last pair that are smooth. For the rest the ambulatory legs are glabrous.

Pot. angustifrons A. M. E., from Cape York, a type-specimen of which from the Paris Natural History Museum is lying before me, is a different species. In this form, indeed, there is an epibranchial tooth; the front is much broader than the orbits and appears more enlarged, with the lateral margins more oblique. The postorbital groove is much deeper and the cephalothorax is much narrower posteriorly than anteriorly, that is not the case in *Potamon Bürgeri*. The dactylopodites of the ambulatory legs have about the same form in both species, but they are longitudinally ridged above in the Australian species, smooth in *Pot. Bürgeri* and the propodites of these legs are somewhat more slender in the latter.

The Borneo-collection contains also a female without eggs, unfortunately the locality has not been indicated. This specimen very probably belongs to the same species though it shows a few slight differences (Plate 12, Fig. 14♀). In the male, described above, the upper orbital margin runs very slightly backwards, in the female however slightly forwards. The epigastric lobes are ill-defined. The ambulatory legs are a little more slender, as will be seen by comparing the measurements. The chelipedes seem to present only the usual sexual differences. The right chela is somewhat larger than the left; it is less high than that of the male, the granulation extends almost over the whole surface of the palm and the index is very slightly grooved. The smaller chela agrees with that of the male, but the granulation is more distinct. The female has a somewhat larger size than the male.

Measurements of both specimens:

	♂	♀
Length of the cephalothorax.	10¼	11½
Distance between the external orbital angles	9⅔	10¼
Greatest width of the cephalothorax anteriorly.	13⅕	16¼
〃 〃 〃 〃 〃 posteriorly.	13½	15¾
Breadth of the posterior margin of the cephalothorax	7¾	9
Breadth of the free border of the front.	3¼	3
Height of the front i. e. the distance, in the median line, between the epigastric lobes and the frontal margin.	1¾	2
Thickness of the cephalothorax	7½	8½
Breadth of the orbits	3⅕	3⅓
Height 〃 〃 〃	2	2

	♂	♀
Length of the terminal segment of the abdomen	2½	
″ ″ ″ penultimate ″	2½	
Breadth of the anterior margin of this segment	1⅘	
″ ″ ″ posterior ″ ″ ″ ″	2⅕	
Length of the antepenultimate segment	1½	
Breadth of the posterior margin of this segment	3⅖	
Horizontal length of the larger chela	12	12
″ ″ ″ ″ fingers	5¾	5¾
Height of the hand	6¾	5¼
Horizontal length of the smaller hand	9	9¾
″ ″ ″ ″ fingers	4⅘	5¼
Height of the smaller hand	3⅗	3⅔
Length of the legs of the penultimate pair	30	34
″ ″ ″ meropodites of this pair	10	10⅔
Breadth ″ ″ ″ ″ ″ ″	3¼	3⅕
Length ″ ″ propodites ″ ″ ″	5½	6¾
Breadth ″ ″ ″ ″ ″ ″	2	2
Length of the dactylopodites ″ ″	7	8½

Potamon (*Geothelphusa*) *bicristatum*, n. sp.

(Plate 12, Fig. 15).

Two females, without eggs, were collected by Dr. Büttikofer on Mount Liang-Koeboeng. Both specimens are almost of the same size, the larger one was captured in a forest.

This species presents some affinities to *Pot.* (*Geothelphusa*) *Dehaani* White and *Pot.* (*Geothelphusa*) *obtusipes* Stimps., both from Japan; specimens of the former are lying before me.

The cephalothorax is rather much enlarged, the proportion between the width and the length being like 7 : 5; it presents its greatest breadth along a line dividing the anterior third of the upper surface from the middle. The upper surface appears slightly convex anteriorly, as well from before backwards as transversely, curving regularly downwards towards the front, but it is flattened posteriorly. The interregional grooves are as little developed as in *Pot. Dehaani.* The cervical groove is distinctly marked mesially as the usual semicircular groove, but there is no trace at all of the lateral portions, the gastric region being confluent with the branchial one. The cardiac region is likewise not defined, the branchio-cardiac grooves are quite indistinct. The small urogastric areolets that are not contiguous, are only defined by minute puncta, but by no grooves and the depression between the anterior and the posterior branchial region is very faint. The narrow linear mesogastric furrow is continued on the front and also backwards, almost to the middle of the gastric region but does not bifurcate. The epigastric lobes are faintly marked; they are separated anteriorly by a transverse groove from the front and each lobe is bounded posteriorly by a slightly oblique ridge, in front of which one observes a row of fine puncta. These two ridges (Fig. 15^a) meet together at the mesogastric furrow and they are a little farther distant from the anterior groove than the latter from the free border of the front. In the smaller specimen the two ridges are indistinct, the transverse rows of minute puncta being only developed. On each side of the epigastric lobes one observes a transverse ridge, that runs somewhat obliquely forward and outward; these two ridges that are characteristic of our species and that are equally distinct in both individuals, so that the specific name is derived from them, are apparently the rudimentary traces of the post-frontal ridge. They reach laterally as far as the eye-peduncles and are nearly straight.

The distance between the outer orbital angles that are not at all prominent, measures about two thirds the greatest width of the cephalothorax, the proportion between both being as 5 : 3. The free border of the front (Figs. 15^a and 15^b) that is straight, not emarginate in the middle, measures one fourth the greatest breadth of the cephalothorax. It makes angles of 135° with the upper margins of the orbits, about as in *Pot. Dehaani*, so that the shape of the front is nearly the same in both species, the front being distinctly broader above than at the free border.

The front is almost vertically deflexed downward, appears very slightly concave in the middle and its height, in the middle, measures one third the breadth of the free border. The front projects a little more forward than the outer angles of the orbits.

The lateral margins of the cephalothorax are regularly arcuate. The antero-lateral margin is raised into an obscurely denticulate crest that curves a little inward there where the cephalothorax is broadest. There is even no trace of an epibranchial tooth. The postero-lateral margins that are straight, converge slightly backwards, so that at their posterior extremity, above the base of the legs, the cephalothorax is still almost once and a half as broad as measures the distance between the external orbital angles; the postero-lateral margins are rounded and marked with 8 or 9 short oblique, raised lines. The posterior margin of the cephalothorax that is somewhat concave in the middle, is just twice as broad as the free border of the front and but little less broad than the distance between the external orbital angles.

The upper surface of the cephalothorax is smooth and shining; examined under a lens one observes everywhere a fine punctation, the puncta are more numerous on the cardiac and posterior branchial regions than anteriorly and are rare on the mesogastric area. Near the antero-lateral margins a few oblique wrinkles are more or less distinct, but a granulation is nowhere observed; on the front and just behind the orbits a few larger puncta are distributed. The free border of the front and the upper margin of the orbits are quite smooth. In a front view of the cephalothorax (Fig. 15^b), the oval orbits appear somewhat oblique; they measure two thirds the breadth of the frontal margin and are about half as high as broad. The regularly arcuate and obscurely crenulate, lower margin presents no hiatus near the outer angle and the inner angle is not dentiform, not at all prominent. The eye-peduncles are smooth, punctate.

The median process of the smooth posterior margin of the epistome is broadly triangular and terminates into the prominent, compressed, median, palatal ridge, visible in a front-view of the cephalothorax; the lateral ridges are also distinct. A faint transverse groove separates the subhepatic region from the branchial floor, both these regions as also the branchiostegite are nearly smooth, the oblique wrinkles on the postero-lateral margins of the cephalothorax reaching not far on the floor of the branchial chamber. The merus-joint of the outer foot-jaws is a little broader than long (Fig. 15c); the arcuate outer margin makes an obtuse angle with the shorter straight anterior one. The ischial line runs, a little obliquely, just in the middle of the ischium-joint, but does not reach the anterior margin. The outer foot-jaws are punctate, smooth.

The abdomen of the female is also finely punctate, the terminal segment is triangular with obtuse extremity. The chelipedes of the female are small, the right is somewhat larger than the left. The arms are short, the upper margin unarmed at the distal end, the lower surface smooth, with no tubercle near the carpus and with entire margins; the upper margin carries a few oblique wrinkles. The upper surface of the wrist is slightly wrinkled outwards and near the inner margin, but almost smooth in the middle; there is a small acute spine at the inner angle. The right chela is a little more than half as long as the carapace is broad, the fingers, in contact with one another, are slightly longer than the palm that is just as high as long. The palm bears on its outer surface a few small, more or less sharp tubercles, that are somewhat larger at the base of the immobile finger and that are also observed on the two ridges bounding the longitudinal groove on the outer surface of this finger; the faintly grooved dactylus is also a little tubercular. The immobile finger is armed with eight or nine acute teeth, about of the same form and size, those of the dactylus are smaller. The other chela is smaller, but for the rest agrees with the right.

The ambulatory legs are slender and moderately long, so are e. g. those of the penultimate pair a little more than twice as long as the cephalothorax. The meropodites of the penultimate pair are 4-times as long as broad, their upper margin is slightly rugose, but devoid of a tooth at the distal end and their outer surface is nearly smooth. The propodites of this pair are about 3-times as long as broad, they show a few small spines along their posterior margin, but they are also smooth. The terminal joints of the penultimate legs are 6-times as long as broad at the base, slightly longer than the propodites and taper rather regularly towards the slightly arcuate tips; some small spinules are observed along their margins. The three terminal joints of the ambulatory legs are also smooth and glabrous.

The cephalothorax is lead-coloured, the legs are lighter and yellowish marmorate.

Potamon Dehaani may at first sight be distinguished by its less enlarged cephalothorax, that is considerably longer in proportion to its breadth. The antero-lateral margin is more coarsely granulate and one of these granules is sometimes more prominent than the others and then appears as a rudimentary epibranchial tooth, but in other specimens there is no trace of such a granule. The lateral ridges, traces of the postfrontal crest, that are observed in *Pot. bicristatum*, are quite absent in the Japanese species. The oblique rugosities on the postero-lateral margins are indistinct or quite wanting in *Pot. Dehaani*. The posterior margin of the cephalothorax is much broader in the Borneo-species than in the other and so still other differences might be enumerated.

Potamon obtusipes Stimps. from the Japanese island of Ousima is also different, I think. According to measurements of this species published some time ago (de Man, in: Max Weber, Zool. Ergebnisse einer Reise nach Niederländisch Ost-Indien, T. II, 1892, p. 290) the cephalothorax of this species appears also somewhat longer in proportion to its breadth than that of *Pot. bicristatum*, the upper surface is somewhat granular near the antero-lateral margin and probably not ornamented with the ridge-like traces of the post-frontal crest that are characteristic of the species of Mount Liang-Koeboeng: no doubt still many other differences exist.

Measurements in millim.:

	♀	♀
Length of the cephalothorax	12½	12¼
Greatest width of the cephalothorax	17½	17
Distance between the external orbital angles	10¾	10⅔
Breadth of the free border of the front	4⅔	4¾
Height of the front i. e. the distance between the frontal margin and the epigastric lobes	1½	1½
Breadth of the posterior margin of the carapace	9¼	9½
Breadth of the orbits	3	3
Height " " "	1¾	1¾
Horizontal length of the larger chela	9¾	
" " " " fingers	5½	
Height of the palm	4¼	
Length of the legs of the penultimate pair	30	30
Length of the meropodites of this pair	9¾	9¾
Breadth " " " " "	2⅖	2⅖
Length " " propodites " " "	6	6
Breadth " " " " " "	1⅘	1⅘
Length " " dactylopodites " " "	7¼	7

Metopograpsus M. E.

Metopograpsus messor Forsk., var. *gracilipes* de M.

Metopograpsus messor Forskål, de Man in: Max Weber, Zool. Ergebnisse einer Reise nach Niederl. Ost-Indien, T. II, 1892, p. 314.

Metopograpsus messor Forskål, var. *gracilipes* de Man in: Zoolog. Jahrb., herausgegeben von J. Spengel, T. IX, Abth. für System. p. 75.

One female was collected by Dr. Hallier in 1893 at the isle of Lemoekoetan near Singkawang; it has no eggs and unfortunately has lost the anterior legs.

I was enabled to compare it with the ova-bearing female from Padang, mentioned in the first of the two papers quoted above. Both specimens closely agree with one another and certainly belong to the variety *gracilipes*, established by myself in 1891 (Notes from the Leyden Museum, Vol. XIII, p. 49) after a young male from the Pacific Ocean, but the carapace of the female from the isle of Lemoekoetan is somewhat shorter in proportion to the distance between the outer orbital angles. In Dr. Hallier's specimen the front is a little less prominent and its anterior margin is straight in the middle, but in the other a median emargination, though quite shallow, is still perceptible. The ambulatory legs fully agree. The named differences may, I think, be regarded as individual.

Measurements in mm.:		1 ♀	2 ♀
Distance between the external orbital angles		$17\frac{2}{3}$	$16\frac{2}{3}$
Length of the cephalothorax.		$11\frac{1}{4}$	$12\frac{1}{4}$
Breadth of the front		11	$10\frac{1}{2}$
Length of the propodites in the middle	of the penultimate pair.	$5\frac{1}{2}$	$5\frac{2}{3}$
Breadth " " " " " "		2	$2\frac{1}{6}$
Length " " dactylopodites		$4\frac{1}{2}$	$4\frac{1}{2}$

N°. 1. Female collected by Dr. Hallier, N°. 2 that from Padang.

Sesarma Say.

Sesarma (*Sesarma*) *Amphinome*, n. sp.

(Plate 12, Fig. 16).

Five specimens, viz. 2 males and 3 females, were collected by Max Moret, probably at Sintang.

Miss Rathbun has recently proposed (in: Proc. Biol. Soc. of Washington, Vol. XI, 1897, pp. 89 and 90) the name of *Sesarma* for my subgenus *Episesarma* and that of *Holometopus* M. E. for my subgenus *Sesarma* and I think she is in the right.

This new species now belongs to the subgenus *Sesarma*

Rathb. and bears some resemblance to *Sesarma angustifrons* A. M. E. The male from Tahiti that was referred by myself, in 1889, to the latter species (in: Zool. Jahrbücher, Abth. für System. T. IV, p. 432, Pl. X, fig. 10), was, upon my demand, kindly sent me by the Direction of the Senckenbergische Gesellschaft at Frankfort on the Main, so that I now am able to indicate the differences.

The 5 specimens of *Ses. Amphinome* are, I think, still young, none of the females carrying eggs and therefore it is a pity that no more specimens were collected.

As regards the general shape of the cephalothorax, the new species closely resembles *Ses. angustifrons*, the slightly concave lateral margins diverging also somewhat backwards, so that the cephalothorax is broadest above the legs of the antepenultimate pair. The cephalothorax is, however, a little shorter in proportion to the distance between the external orbital angles and the straight posterior margin is comparatively broader than in *Ses. angustifrons*.

In the male from Tahiti the posterior margin is just half as broad as the distance between the outer angles of the orbits and less broad than the front, but in *Ses. Amphinome* it is considerably broader and distinctly broader than the front. The upper surface is slightly convex from before backwards. The interregional grooves are somewhat deeper and more distinct than in the *Sesarma* from Tahiti; in the male of *Ses. angustifrons* the mesogastric region is undivided, but in *Ses. Amphinome* it is distinctly tripartite. The protogastric regions are covered with some small tubercles anteriorly, immediately behind the post-frontal lobes and the hepatic area is also somewhat tubercular; in the male from Tahiti these small tubercles are not observed. The upper surface of the cephalothorax appears finely punctate under a magnifying glass, but the puncta are irregularly distributed. On the tubercular anterior half of the protogastric regions, on the hepatic area, on the grooves between the three parts of the mesogastric lobe and on the intestinal and posterior branchial regions the puncta are very fine, numerous and crowded; on the rest of the surface the puncta are rare and the transverse anterior branchial lobes, that are situated immediately behind the protogastric regions, are almost smooth, devoid of puncta. The strongly declivous lateral sides of the cephalothorax are covered with numerous oblique raised lines.

The upper margin of the front is a little more than half as broad as the distance between the extra-orbital angles, the proportion of its breadth to the latter is the same as in *Ses. angustifrons.* The four post-frontal lobes, placed in a straight transverse line, are separated from one another by rather deep grooves just as in *Ses. angustifrons*; they are prominent, though they do not conceal the inferior margin of the front, when the carapace is looked at from above. The internal lobes (Fig. 16^a) are once and a half, in *Ses. angustifrons* (Fig. 17) almost twice as broad as the external; they are rounded and almost smooth. The front (Figs. 16^a and 16^b) that is a little concave and vertically deflexed downwards, making a right angle with the upper surface of the cephalothorax, is almost 4-times as broad as high in the middle; it has a somewhat different form in both species. The lateral margins, indeed, that are parallel with one another in *Ses. angustifrons,* slightly converge in *Ses. Amphinome* and the inferior margin is a little arcuate. The latter presents a slight, moderately broad emargination in the middle, in *Ses. angustifrons* (Fig. 17) the median sinus is much deeper; in a front-view of the cephalothorax this median emargination is also visible, in the other species not. On each side of the median sinus one observes on the front a transverse ridge, about as broad as the inner post-frontal lobes and contiguous to the lower margin of the front; these ridges that do not reach the lateral angles of that margin, are quite absent in *Ses. angustifrons.*

In the middle the front appears somewhat granular. In one of the female specimens the lateral grooves dividing the postfrontal lobes from one another are wanting, the internal lobes being coalescent with the external ones, but this is of course an abnormity. The orbits are large as in *Ses. angustifrons* and the eye-peduncles project a little more beyond them than in the species from Tahiti.

Both species may at first sight be distinguished by the different shape of the extraorbital tooth. In *Ses. Amphinome* (Fig. 16a) this tooth is less prominent, less acute and comparatively much smaller than in *Ses. angustifrons*, its outer margin is more curved inward and the notch separating it from the epibranchial tooth is larger and deeper. In the species from Tahiti only a trace of a second epibranchial tooth is observed, but in *Ses. Amphinome* this second tooth is quite distinct though small and little prominent, and separated from the first by a distinct notch; both epibranchial teeth project laterally less outwards than the extra-orbital tooth and are obtuse. In *Ses. angustifrons* the extra-orbital tooth is slightly longer than the epibranchial, but in *Ses. Amphinome* the first epibranchial tooth appears distinctly somewhat larger and longer than the extra-orbital; the outer margin of the first epibranchial tooth is slightly arcuate and this tooth is somewhat raised upwards. A few short fine hairs are seen on the postfrontal lobes, on the tubercles of the hepatic area and on the lateral margins of the epibranchial teeth.

As regards the lower surface of the cephalothorax, e. g. the form of the epistome and of the outer maxillipedes, the two species closely resemble one another; in both the merus-joint of the latter is little longer than broad, the proportion being as 6 : 5, it is oval and rounded anteriorly.

The abdomen of the male (Fig. 16c) has also about the same form, but the penultimate segment is a little shorter in proportion to its breadth: in the male of *Ses. angustifrons* the penultimate segment is $2^1/_2$ mm. long, its posterior margin $5^1/_5$ mm. broad.

The chelipedes of the male are almost equal; they nearly agree with those of *Ses. angustifrons*. In both species the inner angle of the wrist is obtuse, without a trace of a tooth and the upper surface is granular. In the larger male the horizontal length of the hand (Fig. 16^d) measures two thirds the width of the cephalothorax. The fingers are regularly tapering and have pointed tips, while those of *Ses. angustifrons* are slightly excavated at the extremities, but this may perhaps depend upon their young age. The fingers are a little longer than the palm. The convex outer surface of the latter is granular as also its upper margin, that presents no trace of pectinated ridges; the convex inner surface bears a transverse row of granules, between which and the wrist the surface is somewhat granular, in *Ses. angustifrons*, however, one observes a prominent transverse crest with granulated edge. The dactylus is somewhat granular at base, for the rest quite smooth and the immobile finger is also smooth; a few very short fine hairs are distributed on palm and fingers. The ambulatory legs almost closely resemble those of *Ses. angustifrons*, as is also proved by the measurements. The meropodites e. g. of the penultimate pair are 3-times, the propodites almost 4-times as long as broad and the terminal joints are just as long as the propodites. The meropodites are armed with an acute tooth at the end of their upper margin and show transverse rugosities on their outer surface, while those of the last pair are almost smooth. The dactylopodites (Fig. 16^e) are slender, slightly curved towards the pointed extremities; along the posterior margin of these joints and of the propodites two rows of movable spines are observed. Along the anterior and the posterior margin of the three terminal joints, short stiff hairs are distributed, black at their proximal and white at their distal half, but for the rest all these joints are smooth, not tomentose; a few similar hairs are also seen on the margins of the meropodites. One observes these hairs likewise on the ambulatory legs of *Ses. angustifrons*, but the three terminal joints are moreover more or less tomentose along their margins and the dactylopodites and propodites are unarmed, devoid of spines (Fig. 17^b).

Measurements in mm.:

		♂	♂	♀	♀	♀
Distance between the external orbital angles . .		10	$8\frac{1}{2}$	$10\frac{1}{2}$	10	$9\frac{1}{2}$
Greatest width of the cephalothorax.		11	$9\frac{1}{4}$	$11\frac{1}{2}$	$11\frac{1}{4}$	$10\frac{1}{2}$
Length 〃 〃 〃		9	$7\frac{3}{4}$	$9\frac{3}{4}$	9	$8\frac{3}{4}$
Breadth of the upper margin of the front. . .		$5\frac{2}{5}$	$4\frac{1}{2}$	$5\frac{3}{4}$	$5\frac{1}{4}$	5
Height of the front in the middle		$1\frac{1}{2}$	$1\frac{1}{5}$	$1\frac{2}{5}$	$1\frac{2}{5}$	$1\frac{1}{4}$
Breadth of the posterior margin of the cephalothorax.		6	$5\frac{1}{5}$	7	$6\frac{1}{2}$	$6\frac{1}{5}$
Length of the terminal segment of the abdomen.		$1\frac{3}{5}$	$1\frac{2}{5}$			
〃 〃 〃 penultimate segment		$1\frac{2}{3}$	$1\frac{1}{2}$			
Breadth of the anterior margin of this segment.		2	$1\frac{3}{4}$			
〃 〃 〃 posterior 〃 〃 〃 〃 .		$3\frac{3}{4}$	$3\frac{1}{5}$			
Horizontal length of the chela.		7	$4\frac{4}{5}$	6	$5\frac{3}{4}$	$5\frac{1}{2}$
〃 〃 〃 〃 fingers		$3\frac{3}{4}$	$2\frac{2}{3}$	$3\frac{1}{4}$	$3\frac{1}{4}$	$3\frac{1}{5}$
Height of the hand		$3\frac{1}{4}$	$1\frac{5}{6}$	$1\frac{4}{5}$	$1\frac{6}{7}$	$1\frac{1}{2}$
Length of the meropodites	of the legs of the penultimate pair.	8		$8\frac{1}{2}$	$7\frac{3}{4}$	$7\frac{1}{2}$
Breadth 〃 〃 〃		$2\frac{4}{5}$		$2\frac{4}{5}$	3	$2\frac{3}{5}$
Length of the propodites		$5\frac{1}{4}$		$5\frac{1}{2}$	$5\frac{1}{5}$	5
Breadth 〃 〃 〃		$1\frac{1}{2}$		$1\frac{1}{2}$	$1\frac{1}{2}$	$1\frac{1}{2}$
Length of the dactylopodites		$5\frac{1}{4}$		$5\frac{1}{3}$	5	$4\frac{3}{4}$
Breadth 〃 〃 〃		$\frac{3}{5}$		$\frac{2}{3}$	$\frac{3}{5}$	$\frac{1}{2}$

Ierseke, May 1899.

List of all the species of *Potamon* Sav. (inclusive *Parathelphusa* H. M. E.) described up to the present time, May 1899 1).

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1) This List was published already last year in: Annali del Museo Civico di Storia Nat. di Genova, Ser. 2, Vol. XIX, 1898, p. 435, of course without the Borneo-species described in this paper.

The *african* species are printed in italics. The three following, a description of which has never appeared as far as I know, are nomina nuda and are not mentioned in the List. These species are *Pot. gracilipes* White 1847 from the Philippine Islands and furthermore *Pot. granulosum* Marts. and *Pot. Schweinfurthi* Marts., two species quoted by Hilgendorf (Monatsberichte k. Akad. d. Wiss. Berlin, 1878, p. 802).

As habitat I have only quoted the locality indicated in the first description of the species.

Subgenus *Potamon* s. s. and subg. *Geothelphusa* Stps.

1.	Abbotti Rathbun 1898	Malay Peninsula.
2.	*africanum* A. M. E. 1869	Gaboon.
3.	*Anchietae* Cap. 1870	North of Angola.
4.	andersonianum W.-Mas. 1871	W. Yunan, Upper-Burma.
5.	angustifrons A. M. E. 1868	Cape York.
6.	artifrons Bürg. 1894	Philippine Islands.
7.	atkinsonianum W.-Mas. 1871	Darjeeling, Nepal.
8.	*Aubryi* H. M. E. 1853	Gaboon.
9.	aurantium Hbst. 1799	East-Indies.
10.	austenianum W.-Mas. 1871	Cherra Púnjí.
11.	*Ballayi* A. M. E. 1886	Congo.
12.	*bayonianum* Cap. 1864	North of Angola.
	» *var. α.* Cap. 1870	South of Angola.
13.	Berardi Aud. 1826	Egypt.
14.	bicristatum de M. 1899	West-Borneo.
15.	*bipartitum* Hilgd. 1898	German East-Africa.
16.	*Bottegoi* de M. 1898	Country of the Somali.
17.	Bürgeri de M. 1899	West-Borneo.
18.	callianira de M. 1888	Mergui Archipelago.
19.	cariniferum de M. 1888	Mergui Archipelago.
20.	celebense de M. 1892	Celebes.
	» var. lokaensis de M. 1892	Celebes.
	» var. pareparensis de M. 1892	Celebes.
21.	chilense Hell. 1862	Chili.
22.	consobrinum de M. 1899	West-Borneo.
23.	corrugatum Hell. 1868	Madras, Java.
24.	crassum A. M. E. 1869	Cape York.
25.	crassum Miers 1884 (Report Voyage of H. M. S. »Alert", 1884, p. 235).	Thursday Island.
26.	cristatum A. M. E. 1869	Habitat unknown.
27.	Cumingii (White) Miers (Report Voyage of H. M. S. »Alert", 1884. p. 236)	Philippine Islands.
*28.	cunicularis Westw. 1836	Western Ghâts.
29.	*Decazei* A. M. E. 1886	Franceville, San-Benito.
30.	Dehaanii White 1847	Japan.
31.	denticulatum H. M. E. 1853	China.
32.	*depressum* Krauss 1843	Natal.

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*) The species marked with an asterisk, are those the description of which I have *not* been able to consult. There are among the species mentioned in the List several synonymes some of which have been indicated.

depressum var. *Johnstoni* Miers 1885.	Kilima-njaro.
33. *difforme* H. M. E. 1853 = *Berardi* Aud.	»Red Sea".
34. *dubium* Cap. 1873	Rio Cunene, Mossamedes.
» var. *Jallae* Nob. 1896	Kazungula.
35. Edwardsi W.-Mas. 1871.	Yunan, Upper-Burma.
36. *emarginatum* Kingsl. 1880.	West-Africa; Port-Natal.
37. *Emini* Hilgd. 1892	Victoria Nyansa.
38. enodis Kingsl. 1880	Ceylon.
39. fluviatile Latr. 1803	Southern Europe.
40. Goudoti H. M. E. 1853	Madagascar.
41. *granosum* Koelbel 1884 = *socotrense* Hilgd.	Isle of Socotora.
42. granulatum de M. 1892.	Java.
43. grapsoides White 1847	Philippine Islands.
44. Guerini H. M. E. 1853	Habitat unknown.
45. hendersonianum de M. 1899	West-Borneo.
46. *Hilgendorfi* Pfeff. 1889	German East-Africa.
47. hippocastanum Müll. 1887	Trincomali.
48. hispidum W.-Mas. 1871.	Upper-Burma.
49. hydrodromus Hbst. 1796	Tranquebar.
*50. ibericum (Bieberstein) 1809	Caucasus.
51. indicum Latr. 1825	India.
52. *inflatum* H. M. E. 1853	Port-Natal.
53. *infravallatum* Hilgd. 1898.	German East-Africa.
*54. intermedium Czern. 1884	
(According to Ortmann (1897) this species is identical with *Pot. ibericum* (Bieb.)).	
55. Jagori Marts. 1868	Isle of Luzon.
56. japonicum de H. = Dehaani White.	Japan.
(Confer: Herklots, Symbolae Carcinologicae, 1861, p. 13).	
57. kenepai de M. 1899	West-Borneo.
58. Kuhli de M. 1883.	Java.
59. laeve W.-Mas. 1871	Cherra Púnjí, Goalparah.
60. Larnaudii A. M. E. 1869	Bangkok.
» var. brevimarginata de M. 1892.	Sumatra.
61. Leichardti Miers 1884 (Report Voyage of H. M. S. »Alert", 1884, p. 236).	West-Australia.
62. Leschenaulti H. M. E. 1837	Pondichery.
63. levicervix Rathbun 1898	Loo Choo Islands.
64. limula Hilgd. 1882	Isle of Salanga.
65. longipes A. M. E. 1869.	Poulo Condore.
66. loxophthalmum de M. 1892	Borneo.
67. lugubre W.-Mas. 1871	India.
68. *macropus* Rathbun 1898	Liberia.

69.	madagascariense A. M. E. 1872	Madagascar.
70.	mahakkamense de M. 1899	Upp. Mahakkam, Borneo.
71.	*margaritarium* A. M. E. 1869	St. Thomé.
72.	masonianum Hend. 1893	India.
73.	Melanippe de M. 1899	West-Borneo.
74.	montanum Bürg. 1894	Isle of Luzon.
75.	*mrogoroense* Hilgd. 1898	German East-Africa.
76.	*Neumanni* Hilgd. 1898	German East-Africa.
77.	*obesum* A. M. E. 1868	Zanzibar.
78.	obtusipes Stps. 1858	Japan.
79.	pealianum W.-Mas. 1871	Assam.
80.	*Pelii* Herkl. 1861	St. George-del-Mina.
81.	*perlatum* H. M. E. 1837	Cape of Good Hope.
82.	philippinum Marts. 1868	Philippine Islands.
83.	pictum Marts. 1868	Isle of Luzon.
84.	*pilosum* Hilgd. 1898	German East-Africa.
85.	planatum A. M. E. 1869	Bombay.
86.	planifrons Bürg. 1894	Cape York.
87.	*platycentron* Hilgd. 1897	East-Africa.
88.	pocockianum Hend. 1893	India.
89.	*Reichardi* Hilgd. 1898	East-Africa.
*90.	rotundum Q. & G. 1824	
91.	rugosum Kingsl. 1880	Ceylon.
92.	senex Fabr. 1798	East-Indies.
93.	siamense A. M. E. 1869	Siam.
94.	sinuatifrons H. M. E. 1853	Philippine. Islands.
*95.	*socotrense* Hilgd. 1883	Isle of Socotora.
96.	soror Zhnt. 1894	Ceylon.
97.	subquadratum Gerst. 1856.	Manilla.
98.	sumatrense Miers 1880	Sumatra.
99.	*suprasulcatum* Hilgd. 1898	German East-Africa.
	» var. *pseudoperlata* Hilgd. 1898.	» » »
100.	stoliczkanum W.-Mas. 1871	Penang.
101.	tenasserimense de M. 1898	Tenasserim.
102.	transversum Marts. 1868	Cape York.
103.	tumidum W.-Mas. 1871	Yunan, Upper-Burma.
*104.	Wüllerstorfi Hell. 1862.	
105.	sp. Miers 1880 (On a Collection of Crustacea from the Malaysian Region)	Habitat unknown.
106.	sp. de M. 1880 (de Man, Expédition de Sumatra)	Moeara-Laboe, Sumatra.
107.	n. sp.? de M. 1898	Burma.
108.	sp. de M. 1898	Tenasserim.

Subgenus *Perithelphusa* de M.

1. borneense Marts. 1868	Borneo.
» » var. hilaris de M. 1899.	West-Borneo.
2. Büttikoferi de M. 1899.	West-Borneo.
3. silvicola de M. 1899.	West-Borneo.
4. sp. de M. 1899	West-Borneo.

Subgenus *Parathelphusa* H. M. E.

1. *Brazzae* A. M. E. 1886	Congo.
2. brevicarinata Hilgd. 1882.	Isle of Salanga.
3. *Campi* Rathbun 1894. . . . . ,	Stanley Pool, Congo.
4. *Chaperi* A. M. E. 1887	Assinie.
5. *Chavanesi* A. M. E. 1886	Franceville.
6. convexa de H. (inedit.)	Java.
7. crenulifera W.-Mas. 1876.	Pegu Yomah, Burma.
8. dayana W.-Mas. 1871	Burma.
9. Edwardsi W.-Mas. 1876	India.
10. Feae de M. 1898	Burma.
11. maculata de M. 1879	Sumatra.
12. Martensi W.-Mas. 1876	India.
13. *nilotica* H. M. E. 1837	Nile.
14. *Poecilei* A. M. E. 1886	Alima Latekè, Congo.
15. salangensis Ortm. 1893 = brevicarinata Hilgd. 1882	Isle of Salanga.
16. sinensis H. M. E. 1853	China.
17. spinigera (White) W.-Mas. 1871 . .	Calcutta.
18. tridens Fabr. 1798	East-Indies.
19. tridentata H. M. E. 1853	Indian Archipelago.

EXPLANATION OF THE PLATES.

Plate 5.

Fig. 2. *Menippe Ortmanni* n. sp., female, × 2; *2a* dorsal view of the anterior part of the carapace, × 4; *2b* antennal region and orbit of the left side from before, × 4; *2c* outer maxillipede, × 4; *2d* larger chela, × 2.

Fig. 3. *Potamon* (*Parathelphusa*) *tridentatum* H. M. E., the three terminal segments of the largest male from Mount Kenepai, × 2.

Fig. 4. *Potamon* (*Perithelphusa*) *borneense* v. Mart. var. *hilaris* n., adult male, × $\frac{1}{3}$; *4a* cephalic region of this specimen from before,

× $\frac{3}{2}$; *4b* abdomen and anterior extremity of the sternum of this specimen, × $\frac{3}{2}$; *4c* outer maxillipede, × $\frac{3}{2}$; *4d* right or larger chela of the same male, × $\frac{3}{2}$.

Plate 6.

Fig. 5. *Potamon* (*Perithelphusa*) *Büttikoferi* n. sp., adult male, × $\frac{3}{2}$; *5a* dorsal view of the anterior part of the carapace of this specimen, × 2; *5b* cephalic region of the same male from before, × 2; *5c* outer foot-jaw, × 2; *5d* distal half of the abdomen and anterior part of the sternum of the male, × 2; *5e* larger chela of adult male, × 2.

Fig. 10*d*. *Potamon* (*Potamon*) *consobrinum* n. sp., front of the male from Mount Damoes from above, × 2; 10*e* the same, of the female, × 2.

Plate 7.

Fig. 1. *Myomenippe Leguilloui* A. M. E., cephalothorax of an adult male, type-specimen from the Paris Natural History Museum, collected by Leguillou in the „Mer des Indes", × $\frac{3}{2}$.

Fig. 6. *Potamon* (*Perithelphusa*) *silvicola* n. sp., adult male, × $\frac{3}{2}$; *6a* external maxillipede and anterior part of the sternum of the male × 2; *6b* larger chela of adult male, × 2.

Fig. 7. *Potamon* sp., dorsal view of the anterior part of the cephalothorax of the male, × 3; *7a* abdomen, × 3.

Plate 8.

Fig. 8. *Potamon* (*Potamon*) *mahakkamense* n. sp., dorsal view of the anterior part of the carapace of adult female, × $\frac{3}{2}$; 8*a* cephalic region of this specimen from before, × $\frac{3}{2}$; 8*b* front from above, × 2; 8*c* external maxillipede, × $\frac{3}{2}$; 8*d* larger chela of the same specimen, × $\frac{3}{2}$.

Fig. 9. *Potamon* (*Potamon*) *sinuatifrons* H. M. E., dorsal view of the anterior portion of the carapace of the largest male, 53 mm. broad, type-specimen from the Paris Natural History Museum, × 2; 9*a* front of this specimen from above, × 2.

Plate 9.

Fig. 9*b*. *Potamon* (*Potamon*) *sinuatifrons* H. M. E., dorsal view of the anterior portion of the cephalothorax of a male, 36 mm. broad, type-specimen from the Paris Natural History Museum, × 2; 9*c* posterior margin of the epistome of this specimen, × 4.

Fig. 10*b*. *Potamon* (*Potamon*) *consobrinum* n. sp., dorsal view of the anterior part of the carapace of the male from Mount Damoes, × 2; 10*c* the same of the female from the Upper Sibau river, × 2; 10*f* posterior margin of the epistome of the male, 10*g* of the female, × 2.

Fig. 11. *Potamon* (*Geothelphusa*) *Melanippe* n. sp., female, × 2; 11*a* dorsal view of the anterior portion of the carapace of this specimen,

× 3; 11*b* cephalic region of the same female from before, × 3; 11*c* external maxillipede of female, × 3; 11*d* abdomen of male, × 3; 11*e* larger chela of male, × 3.

Plate 10.

Fig. 10. *Potamon* (*Potamon*) *consobrinum* n. sp., male from Mount Damoes, × 1½; 10*a* cephalic region of this specimen, × 2; 10*h* outer foot-jaw of male, × 2; 10*i* abdomen of male, × 2; 10*j* left chelipede of female, × 2.

Fig. 12. *Potamon* (*Geothelphusa*) *kenepai* n. sp., male, × 2; 12*a* dorsal view of the anterior part of carapace, × 4; 12*c* anterior extremity of the sternum, × 4; 12*d* outer foot-jaw, × 4.

Plate 11.

Fig. 12*b*. *Potamon* (*Geothelphusa*) *kenepai* n. sp., cephalothorax from before, × 4; 12*e* larger chela, × 4.

Fig. 13. *Potamon* (*Geothelphusa*) *hendersonianum* n. sp., adult male, × 2; 13*a* dorsal view of the anterior part of the cephalothorax of the same male, × 4; 13*b* cephalic region of the same specimen from before, × 4; 13*c* outer foot-jaw, × 4; 13*d* abdomen of male, × 4; 13*e* anterior part of the sternum of male, × 4; 13*f* larger chela of adult male, × 2; 13*g* egg, × 2.

Fig. 14. *Potamon* (*Geothelphusa*) *Bürgeri* n. sp., male, × 2; 14*a* dorsal view of the anterior portion of carapace, × 4; 14*b* cephalic region from before, × 4; 14*c* outer foot-jaw, and anterior extremity of the sternum, × 4; 14*d* abdomen of male, × 2; 14*e* penultimate segment of abdomen of male, × 4; 14*f* larger chela, × 2.

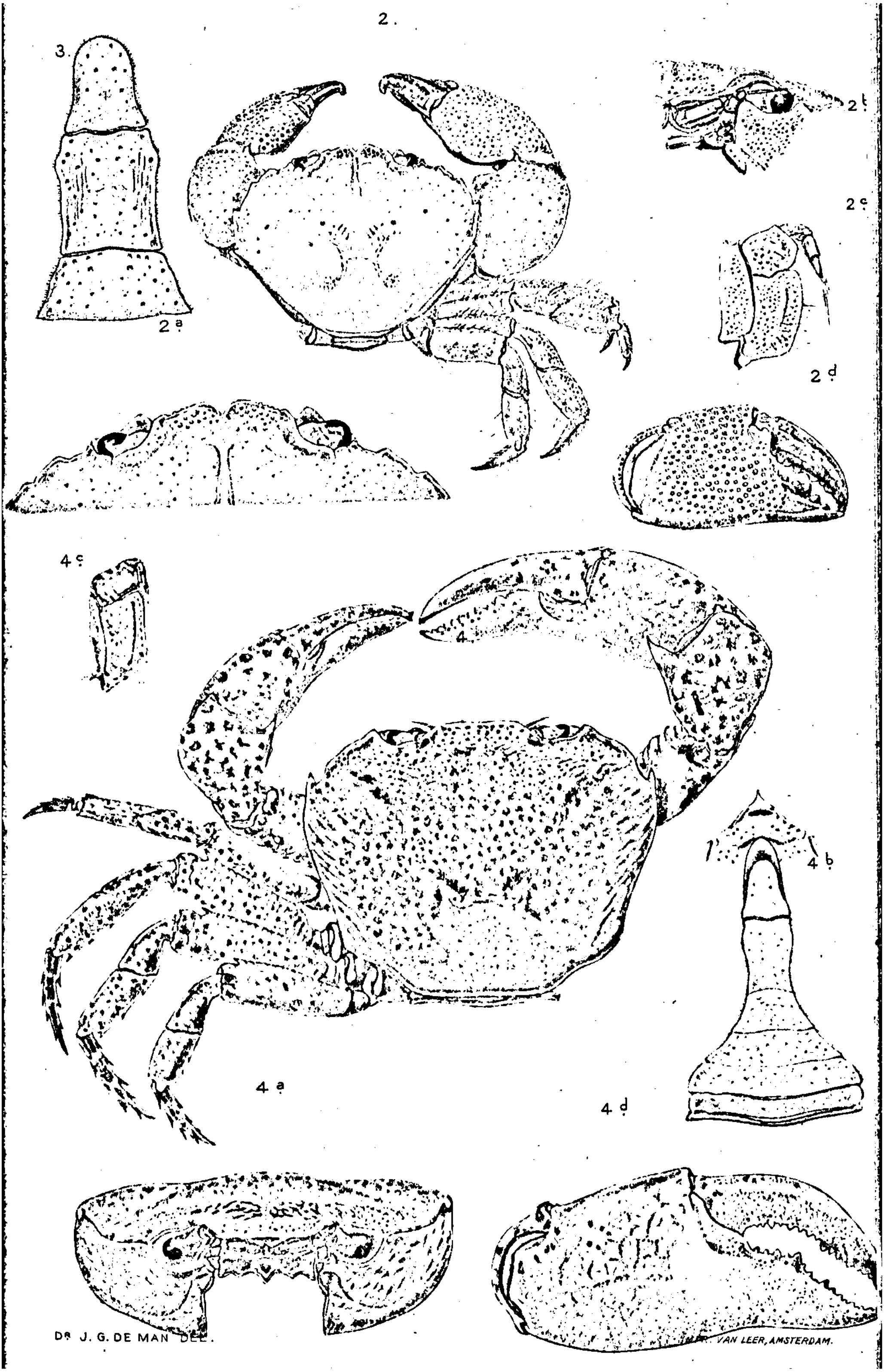
Plate 12.

Fig. *Potamon* (*Geothelphusa*) *Bürgeri* n. sp., dorsal view of the anterior portion of the carapace of the female without definite locality, × 4.

Fig. 15. *Potamon* (*Geothelphusa*) *bicristatum* n. sp., female, × 2; 15*a* dorsal view of the anterior portion of the carapace, × 4; 15*b* cephalothorax from before, × 4; 15*c* external maxillipede, × 4; 15*d* larger hand of female, × 4.

Fig. 16. *Sesarma* (*Sesarma*) *Amphinome* n. sp., male, × 2; 16*a* dorsal view of the anterior portion of the cephalothorax of male, × 4; 16*b* cephalic region of male, × 4; 16*c* abdomen of male, × 4; 16*d* chela of male, × 4; 16*e* two last joints of penultimate pair of legs, × 4.

Fig 17. *Sesarma* (*Sesarma*) *angustifrons* A. M. E., male from the Fiji Islands, dorsal view of the anterior portion of cephalothorax, × 4; 17*a* cephalic region from before, × 4; 17*b* two terminal joints of penultimate pair of legs, × 2.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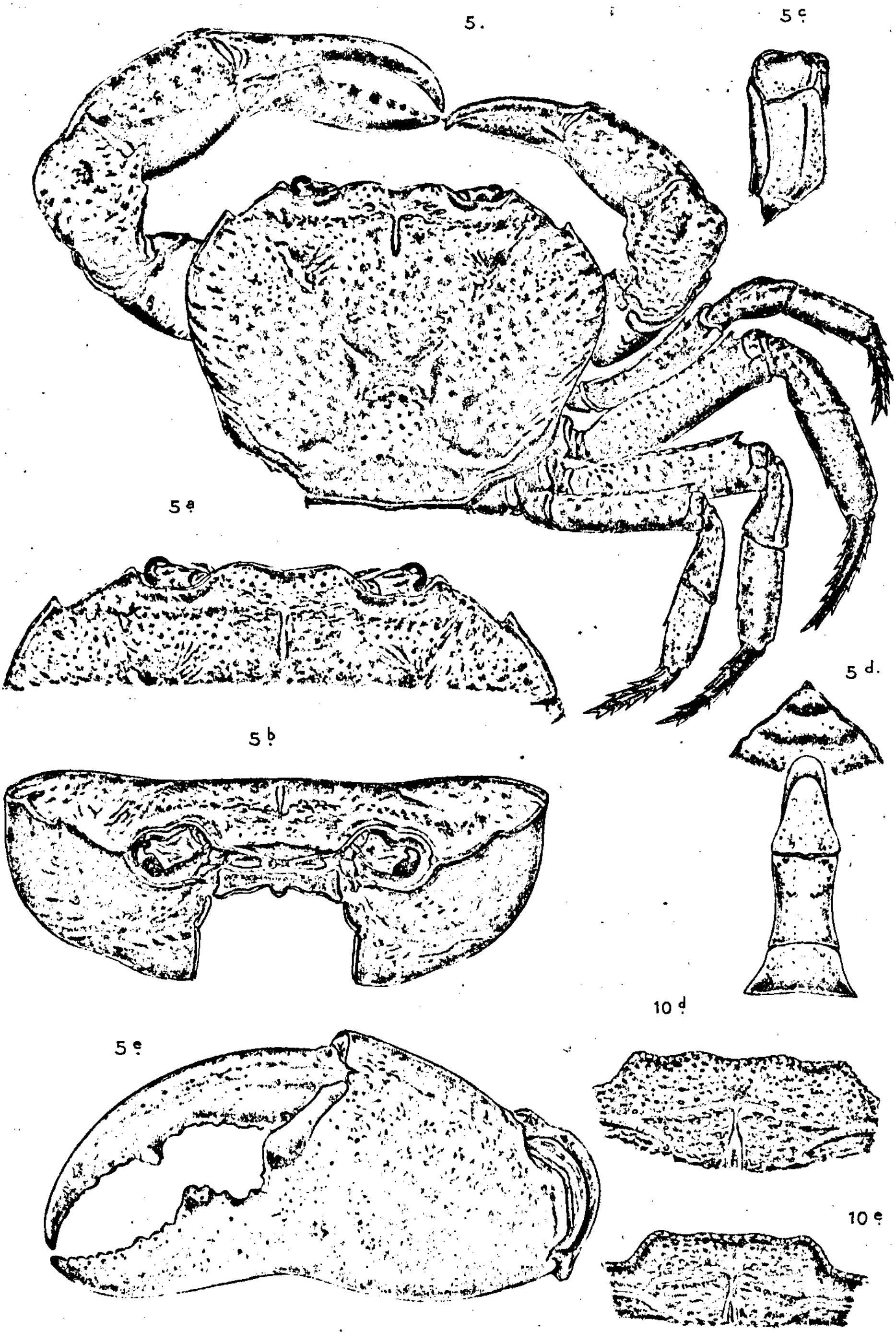
2. Menippe Ortmanni DE MAN. 3. Parathelphusa tridentata H. M. E.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5e.
10e.

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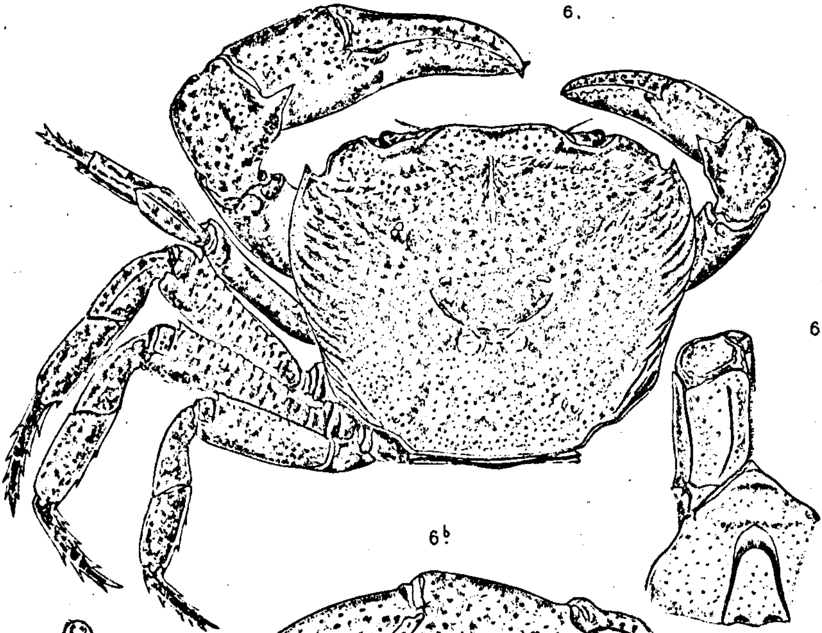
5. Potamon Büttikoferi DE MAN. 10. Potamon consobrinum DE MAN



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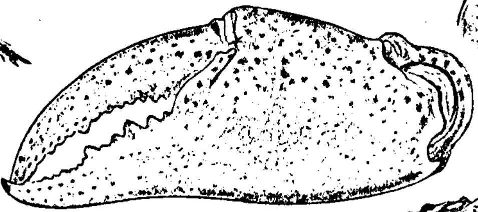

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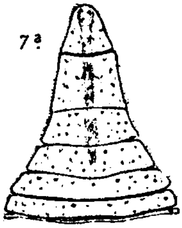

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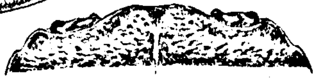

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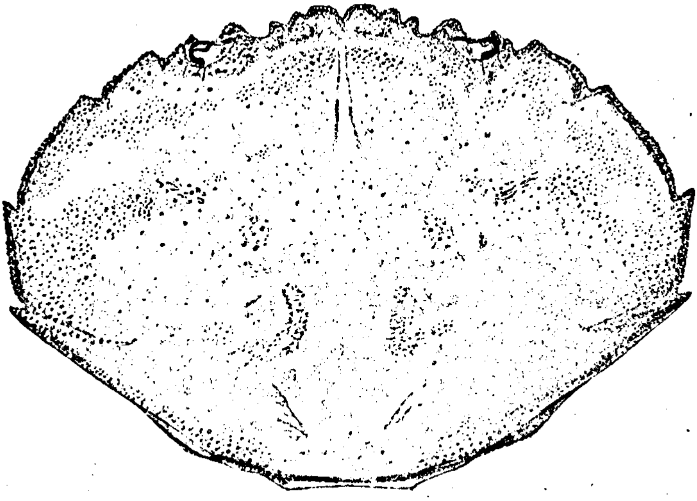

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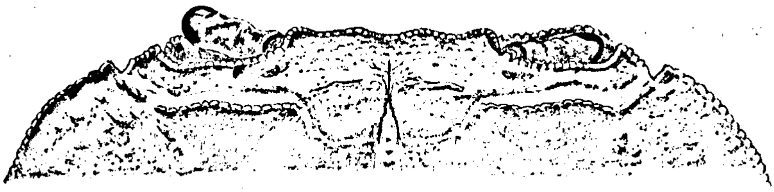
1. Myomenippe Leguillouii A.M.E. 6. Potamon silvicola DE MAN.
7. Potamon sp.

9.



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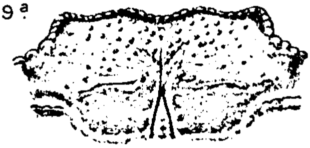

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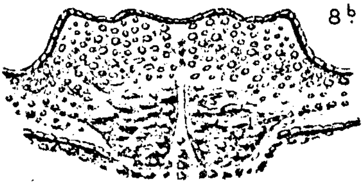

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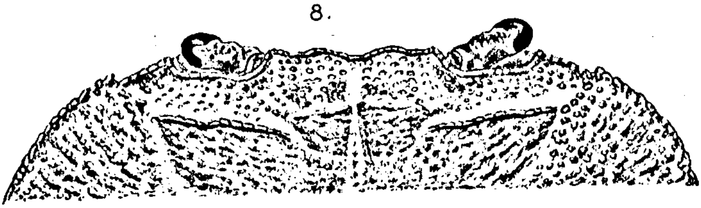

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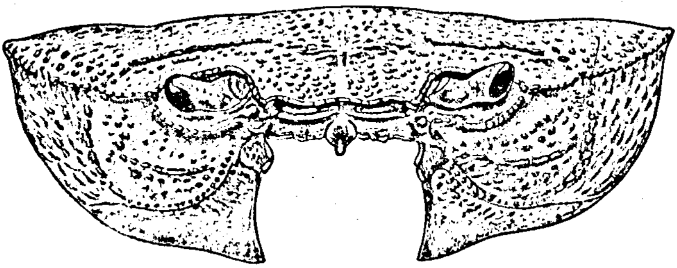

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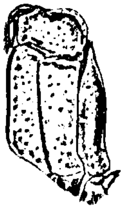

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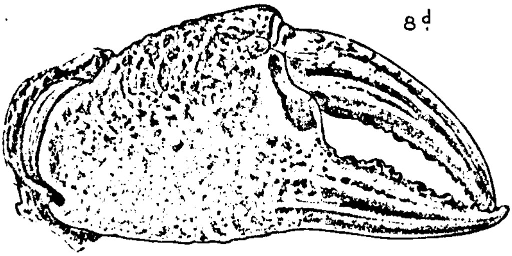

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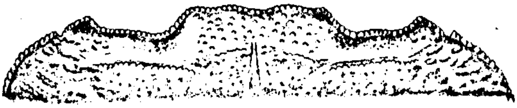
8. Potamon mahakkamense DE MAN.
9. Potamon sinuatifrons H. M. E.

9 b



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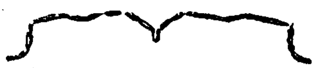

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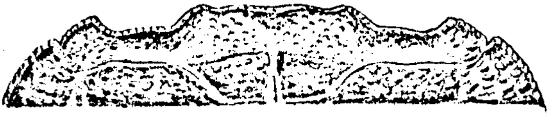

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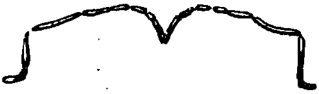

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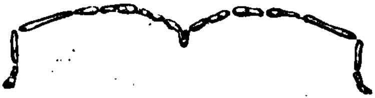

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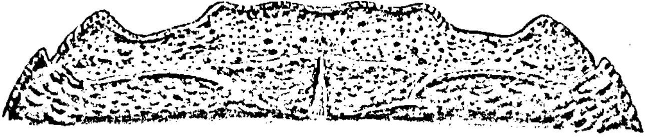

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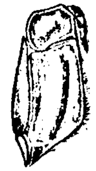

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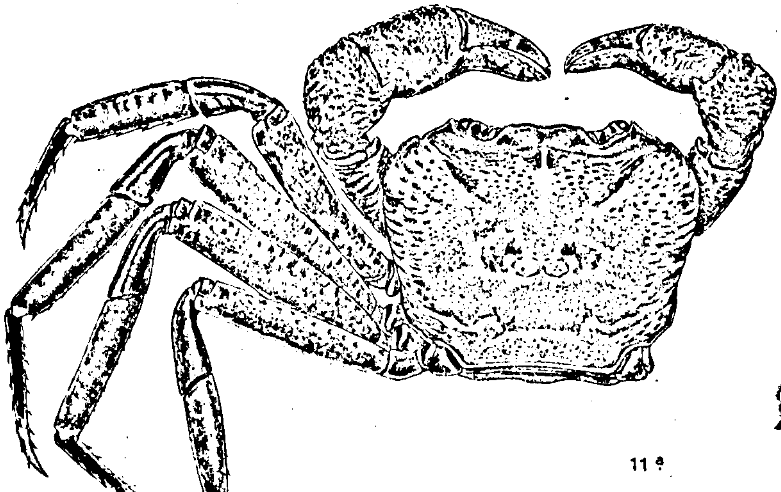

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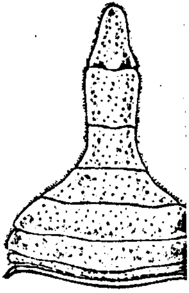

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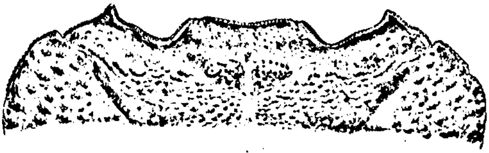

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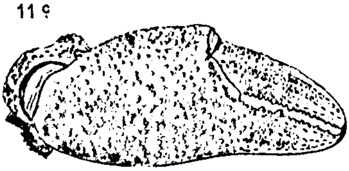

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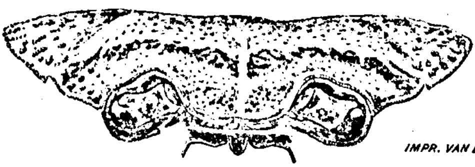

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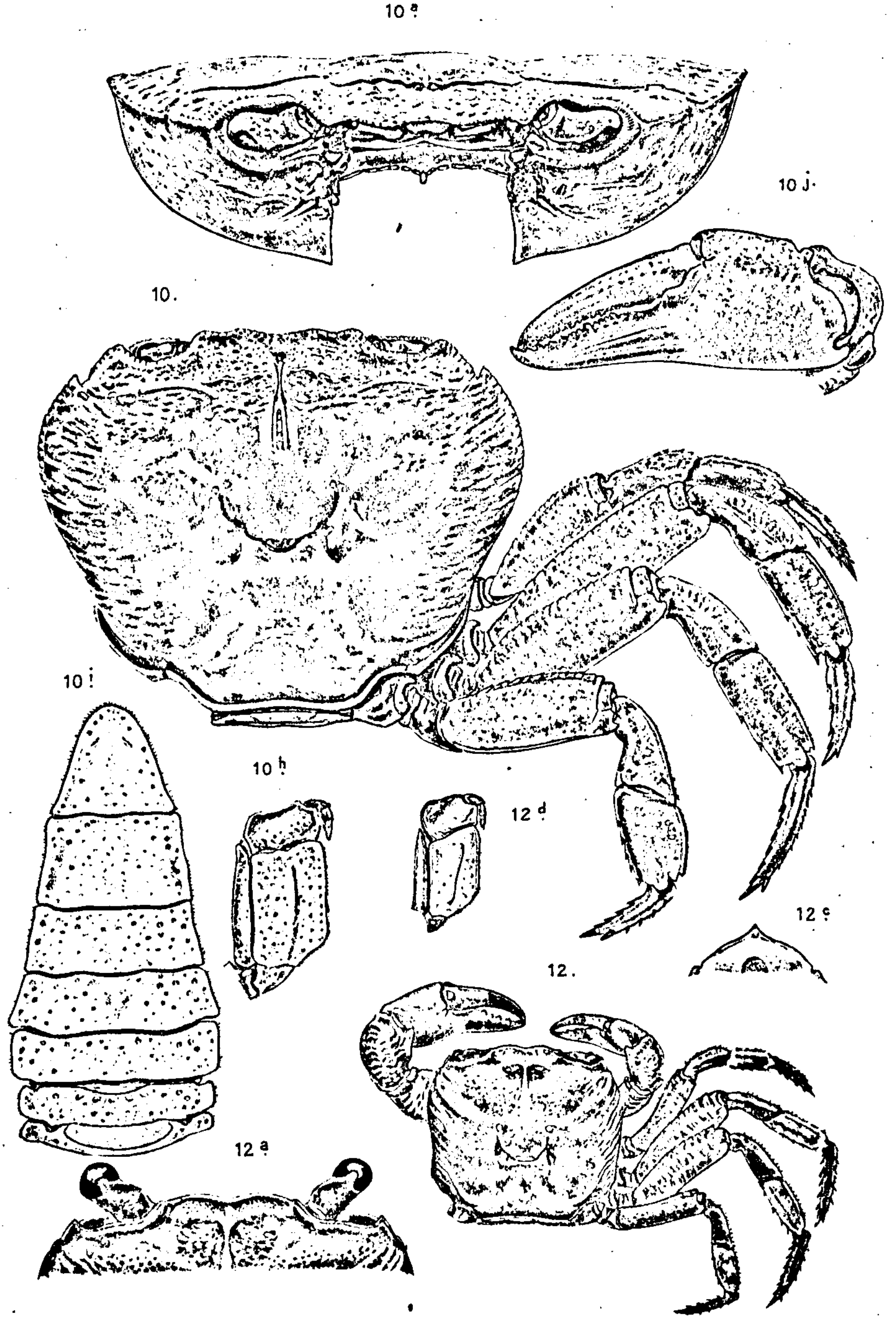
9. Potamon sinuatifrons H. M. E. 10. Potamon consobrinum DE MAN.
11. Potamon Melanippe DE MAN.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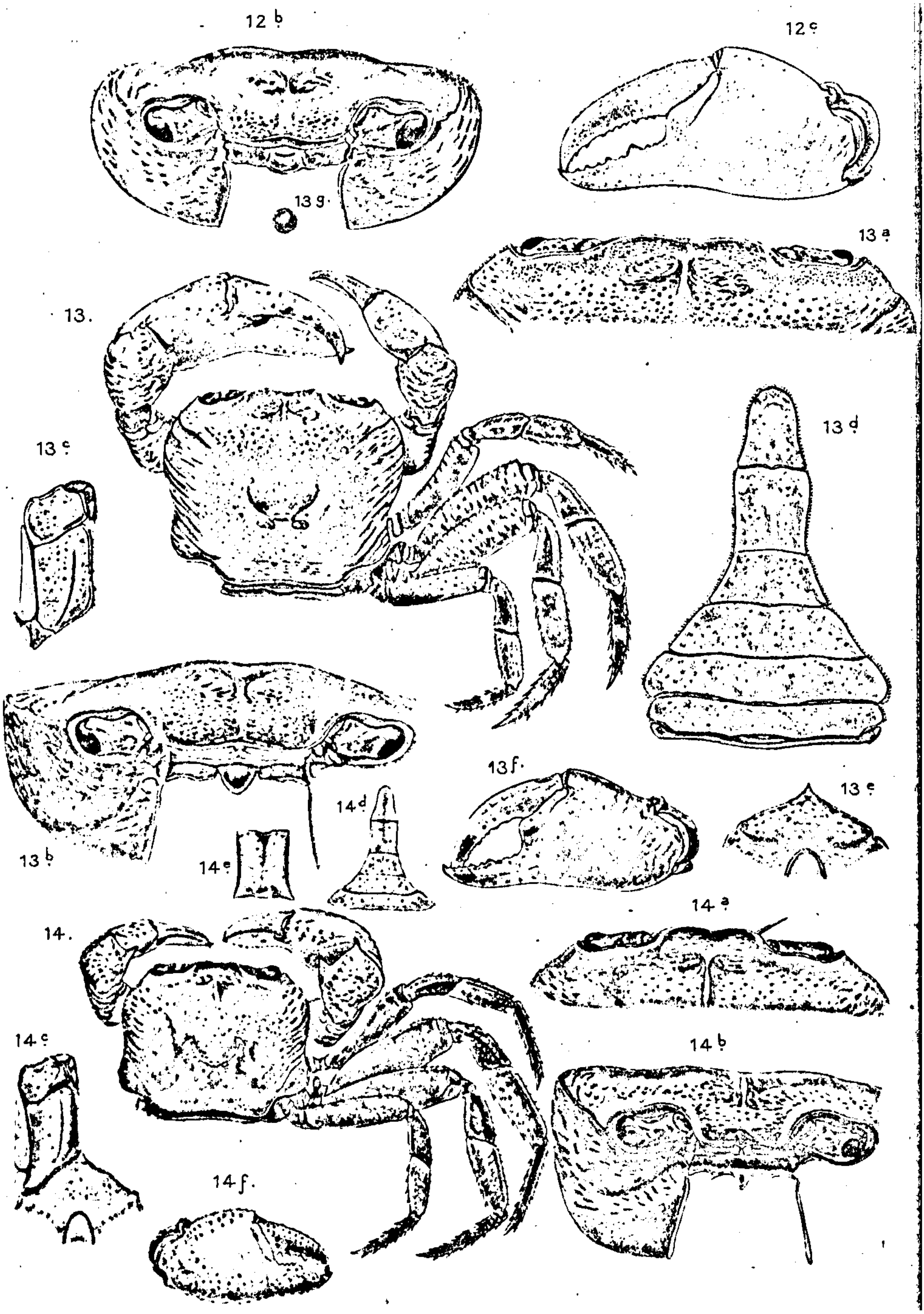
10. Potamon consobrinum DE MAN. 12. Potamon kenepai DE MAN.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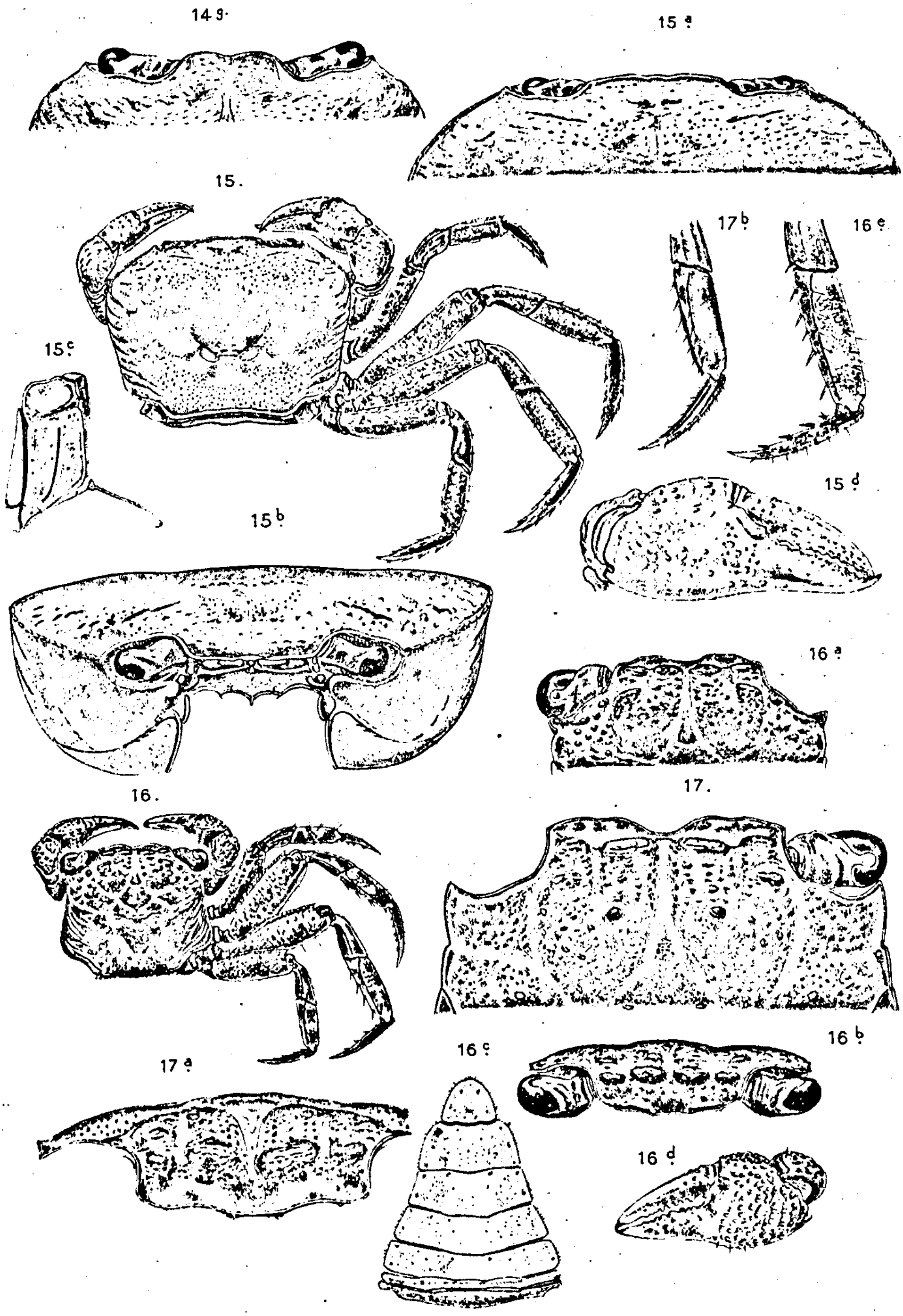
12. Potamon kenepai DE MAN. 13. Potamon hendersonianum DE MAN
14. Potamon Burgeri DE MAN.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14 ♀. Potamon Burgeri DE MAN. 15. Potamon bicristatum DE MAN.
16. Sesarma Amphinome DE MAN. 17. Sesarma angustifrons A.M.E.